Cryptogenic Stroke—Story of a Resolved Mystery

Daniela Bartos
INTERNAL MEDICINE, BUCHAREST, Romania

Introduction: Recurrent ischaemic stroke at young age

Case presentation: It is presented in the following article the case of a 54-year old woman, known with controlled grade III hypertension, four ischaemic strokes (last one in 2016, with hemorrhagic conversion), complete hysterectomy, cholestasis syndrome, four miscarriages in the first trimester, who was admitted in our hospital accusing dysphagia, loss of appetite, weight loss and fatigability.

Physical exam reveals central facial palsy. Lab tests show hepatic cytolysis and cholestasis, elevated CA 19-9 and AFP markers. No pathological findings on endoscopy, colonoscopy and abdominal MRI.

Thus, a digestive etiology has been excluded. Taking dysphagia into consideration, neurological consultation has been required in order to assess the possibility of an embolic stroke. No supraventricular arrhythmias have been found on Holter EKG/24 h monitoring. Trombophilia tests were negative, except hyperhomocystenemia (heterozygous profile). Consequently, transesophageal echocardiography has been performed with a right to left shunt during Valsalva maneuver being found. ROPE score (Risk Of Paradoxical Embolism) calculation attributes a 34% chance that the stroke is PFO-related.

Conclusion: Literature data is controversial regarding the appropriate therapy in this case (use of medical therapy such as antiplatelet agents or anticoagulants vs. percutaneous closure of the defect). After having presented the available therapeutical options, it has been decided to choose minimally-invasive closure with Armplatzer device.
Right Sided Infective Endocarditis

Nerissa Naidoo

Department of Cardiology, Inkosi Albert Luthuli Central Hospital, Durban, Kwa - Zulu Natal, South Africa

Introduction

In South Africa, like many developing countries, right sided infective endocarditis (RSIE) is an unusual occurrence. In the developed world RSIE has been reported in 5-10% of all cases of infective endocarditis and commonly affects the tricuspid valve.

Case Report

We present an interesting case of a 30 year old intravenous drug user who was HIV negative. He presented with isolated native tricuspid valve endocarditis. His presenting symptoms were dyspnea, fever, pleuritic chest pain and malaise. On clinical examination he was found to have tricuspid regurgitation. A transthoracic echocardiogram revealed a large vegetation on the tricuspid valve. Seeding foci to the lungs were confirmed on computerized tomography pulmonary angiogram. Methicillin- sensitive S. aureus was cultured on two sets of blood cultures. He was commenced on the appropriate antibiotics and thereafter underwent a tricuspid valve replacement with an ONYX mechanical prosthetic valve. The patient continued to abuse heroin and represented with early prosthetic valve endocarditis. Methicillin resistant S. aureus was now isolated on a single set of blood cultures. He was commenced on the appropriate antibiotics, but died within 24 hours of presentation to Inkosi Albert Luthuli Hospital.

Summary

RSIE have been reported in intravenous drug users, as a complication of indwelling catheters in the subclavian veins, subjects with underlying congenital heart disease as well as in subjects with pacemakers. S. aureus has been identified as the most common offending organism in patients with RSIE. This case was interesting as the patient presented with both native and then prosthetic valve endocarditis.
Holt-Oram Syndrome

Nerissa Naidoo

Department of Cardiology Inkosi Albert Luthuli Central Hospital, Durban, Kwa-Zulu Natal, South Africa

Introduction

Hand - Heart syndromes are genetically acquired disorders that compose of congenital cardiac and limb deformities. We present a case of Holt- Oram Syndrome (HOS) with a family history that spans 3 generations.

Case Presentation

25 year old female, presented in preterm labour at 20 weeks. The foetus was born without thumbs in both hands and demised. She reported a 10 year history of dizziness, palpitations and exertional dyspnoea. General examination revealed bifid fingerised right thumb, absent left thumb, clinodactyly, bilateral hypoplastic thenar eminences, narrow sloping shoulders, and pectus excavatum. On cardiac examination, there were features suggestive of an atrial septal defect (ASD) which was confirmed on transthoracic echocardiogram. ECG showed Atrial Flutter. Family history revealed that the patient’s mother was born with abnormal thumbs. She had 3 children from different partners. The index patient, the eldest child, was found to have an absent thumb on the left hand at birth. The second child died at seven months after surgery to correct a congenital cardiac defect. The third child underwent a ventricular septal defect (VSD) closure at the age of one and also has skeletal abnormalities.

Discussion

HOS is a rare genetic condition. It has an autosomal-dominant mode of genetic transmission. The responsible gene has been mapped to 12q24.1 which encodes human transcription factor TBX5. TBX5 provides instructions for making a protein that plays a role in the development of the heart and upper limbs. It is the mutations in this gene that lead to a wide range of phenotypes.
Dual Antiplatelet Therapy in the Elderly Population Post Myocardial Infarction a Retrospective Analysis

Yuran Zheng
Cardiology, Greater Manchester, UK

Introduction
Post-MI (Myocardial Infarction) Dual Anti-Platelet Therapy (DAPT) has been shown to reduce cardiovascular mortality. Real world use of DAPT includes Aspirin/Clopidogrel or Aspirin/Ticagrelor, with initial studies on both reported in younger age groups. The full consequences of DAPT use in the over 75 years patients, often with more co-morbidities and risks of death, are as yet unclear.

We aimed to compare outcomes (MACE: death, MI, CVA and bleeding) after post-MI DAPT therapy in over 75 year-olds.

Method
Retrospective analysis of patients admitted with MI above the age of 75 years over a 6-month period, including additional data through follow up over subsequent 6 months.

Results
Median age of the 129 patients was 83 years. 61(47%) were male, 87(67%) hypertensive, 3(2%) hyperlipidemic, 36(28%), diabetic and 68(53%) had previous known ischemic heart disease.

99(77%) patients were on Aspirin/Clopidogrel and 30(23%) on Aspirin/Ticagrelor.

36(28%) patients died within the follow-up. 32 were on Aspirin/Clopidogrel and 4 on Aspirin/Ticagrelor (32.3% vs 13.3% respectively; P = 0.021). MI occurred in 16(12.4%) of patients; 12(12%) on Aspirin/Clopidogrel vs 4(13.3%) on Aspirin/Ticagrelor. Stroke occurred in 7(5.4%) patients; 5(5.1%) on Aspirin/Clopidogrel vs 2(6.7%) on Aspirin/Ticagrelor. Bleeding complications occurred in 12 patients (7.8%), with 9(9.1%) on Aspirin/Clopidogrel vs 3(10%) on Aspirin/Ticagrelor.

Conclusion
DAPT with Aspirin/Clopidogrel is more commonly used in the over 75 years. No significant differences in MACE and bleeding between the 2 treatment groups were seen in our study. There was a difference in all-cause mortality in favour of Aspirin/Ticagrelor, although the mortality remains very high.
Clinical Profile of Patients with Cardiac Arrest Induced by Aortic Disease

Youichi Yanagawa
Acute Critical Care Medicine, Izunokuni, Shizuoka, Japan

Purpose: We performed a retrospective study to investigate the clinical profiles of patients with cardiac arrest induced by acute non-traumatic aortic disease (ANAD).

Methods: From October 2012 to May 2017, a medical chart review was retrospectively performed for all patients with cardiac arrest who were transported to our hospital. We routinely performed whole body computed tomography (CT) for patients with cardiac arrest to determine the cause of the cardiac arrest. The subjects were divided into two groups: the ANAD group, including patients who were diagnosed with ANAD based on the CT findings; and the Control group, including patients who did not.

Results: There were 53 patients in the ANAD group and 402 patients in the Control group. The rate of female, rate of bystander CPR, rate of pulseless electrical activity (PEA) as the initial rhythm and rate of emersion of PEA during resuscitation in the ANAD group were all significantly greater than those in the Control group. The rate of obtaining spontaneous circulation and the survival rate in the ANAD group were significantly lower than those in the Control group. The average age and rate of the witnessed collapses in the ANAD group were greater than those in the Control group.

Conclusion: The present study demonstrated that the clinical profile of patients with cardiac arrest induced by ANAD tended to have a witnessed collapse, advanced age, female gender and pulseless electrical activity, which was a difficulty in obtaining spontaneous circulation by standard resuscitation.
Continuous Non-Invasive Monitoring Of Cerebrovascular Autoregulation During Cardiac Surgery With Cardiopulmonary Bypass To Protect Brain From Post-Operative Cognitive Deterioration

Solventa Krakauskaite

Health Telematics Science Institute, Lithuania

Post-operative cognitive dysfunction (POCD) occurs in ~ 40–60 % of patients after cardiopulmonary bypass (CPB) surgery. The incidence of deteriorated cognition still remains high after 6 weeks and 1 year (30–25 %). The current clinical guidelines recommend that the mean arterial blood pressure (MAP) during CPB should be kept 50-60 mmHg or higher. But lower limit of cerebrovascular autoregulation (CA) is patient-specific and may deteriorate when MAP which is below limit of intact CA.

Our hypothesis is that POCD can be related to a temporal cerebral hypo-perfusion and consequently to the impairment of cerebrovascular autoregulation. We propose to use the innovative ultrasonic real-time CA monitoring technology for identification of the individual patient-specific MAP values during CPB in order to prevent brain injury and POCD.

The preliminary clinical study showed that the duration of the longest cerebrovascular autoregulation impairment event above 300 sec during CPB surgery is associated with risk of POCD for studied population. The non-invasive CA monitor can be used for the patient-specific MAP management during cardiac CPB surgery in order to prevent cognitive dysfunctions. We intend to continue our study by including high-risk hypoxic patients group (hypertension, with left ventricle systolic dysfunction, diabetes patients, etc) for exploring applicability of the present method.
Decreased Platelet Inhibition by P2Y12 Receptor Blockers in Anemia

Christoph Kopp

Department of Internal Medicine II, Vienna, Vienna, Austria

Background: Anemic patients undergoing angioplasty and stenting are at an increased risk of ischemic events, which may be caused by an inadequate response to antiplatelet therapy with adenosine diphosphate (ADP) P2Y12 inhibitors. In the current study, we investigated the associations between anemia and on-treatment platelet reactivity in clopidogrel- (group 1, n=306) and prasugrel-/ticagrelor-treated (group 2, n=109) patients undergoing elective and acute angioplasty with stent implantation, respectively.

Materials and Methods: Monocyte-platelet aggregate (MPA) formation was determined by flow cytometry in both groups. On-treatment residual platelet reactivity in response to ADP was assessed by light transmission aggregometry (LTA) in both groups, and by the VerifyNow P2Y12 assay and the Impact-R in group 1. P-selectin expression was measured by flow cytometry in group 2.

Results: In both groups, anemia was associated with significantly higher MPA formation in response to ADP (both \(p \leq 0.02\)). Moreover, by LTA maximal aggregation in response to ADP was significantly higher in patients with anemia in both groups (both \(p < 0.05\)), and anemic patients in group 1 had a significantly higher on-treatment platelet reactivity by the VerifyNow P2Y12 assay and the Impact-R than those without anemia (both \(p < 0.001\)). In group 2, significantly higher platelet surface expression of P-selectin was seen in anemia after stimulation with ADP (\(p = 0.02\)).

Conclusion: Anemia is associated with decreased platelet inhibition by ADP P2Y12 receptor antagonists after elective and acute percutaneous interventions with stent implantation. However, due to inconsistencies between different platelet function tests additional data are needed to clarify the role of anemia for platelet inhibition.
Prevalence of Fabry Disease in Korean Men with Left Ventricular Hypertrophy

Woo-Shik Kim
Cardiology, Seoul, South Korea

Background: Fabry disease is an X-linked recessive disorder caused by deficiency of the lysosomal enzyme α-galactosidase A. Previous studies identified many cases of Fabry disease among males with left ventricular hypertrophy (LVH). The purpose of this study was to define the frequency of Fabry disease among Korean men with LVH.

Methods: In this national, prospective, multicenter study, we screened for Fabry disease in men with LVH on echocardiography. The criterion for LVH diagnosis was a maximum left ventricular wall thickness 13 mm or greater. We screened 988 men with LVH for plasma α-galactosidase A activity. In patients with low α-galactosidase A activity (3 nmol/hr/mL), we searched for mutations in the α-galactosidase gene.

Results: In seven men, α-galactosidase A activity was low. Three had previously identified mutations: Gly328Arg, Arg301Gln, and His46Arg. Two unrelated men had the E66Q variant associated with functional polymorphism. In two patients, we did not detect GLA mutations, although α-galactosidase A activity was low on repeated assessment.

Conclusion: We identified three patients (0.3%) with Fabry disease among unselected Korean men with LVH. Although the prevalence of Fabry disease was low in our study, early treatment of Fabry disease can result in a good prognosis. Therefore, in men with unexplained LVH, differential diagnosis of Fabry disease should be considered.
Objective/Introduction: Cardiology and internal medicine, as non-surgical branches, most frequently associated with cardiovascular diseases (CVD) in our country. In this study, the claims of malpractice about CVD related with internal medicine and cardiology specialties will be discussed.

Materials and Methods: The archive records of evaluated malpractice claims in The Council of Forensic Medicine (CFM) were reviewed, and 142 of these evaluated by cardiology and internal medicine specialties were included in the scope of the study. Factors such as age, sex, demographic characteristics, injuries of the complainants, types of hospitals, specialties of the complained physicians, causes of complaints according to internal medicine and cardiology specialties, the cases decided as medical malpractice and the cause of the medical errors were investigated.

Results: Of the 142 cases related with the CVD, it was determined that 71.1% (n=101) of them were evaluated by cardiology, 19.7% (n=28) by internal medicine and 9.2% (n=13) by both specialties. Of the cases evaluated by cardiology, malpractice was confirmed in 35.9% (n=41) of the cases, while in 58.8% (n=67) of them no medical error existed and also The Board couldn’t report an opinion about malpractice in 5.3% (n=6) of the cases. In the cases followed by internal medicine, it was found that there was a medical practice error in 48.8% (n=20), where there was no error in in 43.9% (n=18), and in the remaining cases (7.3%) the decision couldn’t be expressed about malpractice.

Conclusion: It is considered that, our study is a guide for clarifying and resolving malpractice claims about CVD and also for demonstrating the importance of cardiology consultation in decision-making.
Long-term Event Reduction After Left Atrial Appendage Closure. Results of the II Iberian Registry

Jose Ramon Lopez-Minguez
Cardiology, Badajoz, Spain

Introduction and objectives: Many patients with non-valvular atrial fibrillation (NVAF) are still left without protection due to a contraindication for anticoagulants (OAC). Although closure of left atrial appendage (LAA) reduce the thromboembolic/bleeding events and mortality in these patients, a better understanding of their natural history is needed. This study aimed to establish the occurrence of stroke and major bleeding events in patients with NVAF and LAA closure with long-term follow-up and explore those factors associated with greater mortality in the long term.

Methods. Analysis of a multicenter single cohort prospectively recruited from 2009 to 2015. Thromboembolic and bleeding events were compared with those expected from CHA₂DS₂-VASc and HAS-BLED scores and according to follow-up duration. Multivariate analysis examined variables associated with mortality during follow-up.

Results. A total of 598 patients (1093 patient-years) with a contraindication for OAC were recruited (median 75.4 years). LAA closure device implantation success was 95.8%. Thirty patients (5%) experienced periprocedural complications.

The rate of events (per 100 patient-years) during follow-up (mean: 22.9 months; median 16.1 months) was: death: 7.0%; ischemic stroke: 1.6% (vs 8.5% expected according to CHA₂DS₂-VASc; p = 0.001); intracranial hemorrhage: 0.8%; gastrointestinal bleeding: 3.2%; severe bleeding: 3.9% (vs 6.3% expected by HAS-BLED, p = 0.002). Age (HR 1.1), intracranial hemorrhage (HR 6.8) and stroke during follow-up (HR 2.7) were significantly associated with higher mortality.

Conclusion. LAA closure significantly reduced the incidence of stroke and of bleeding events and benefit was maintained. Intracranial hemorrhage, age and stroke were associated with higher mortality.
Hyperuricemia Associated with Left Ventricular Diastolic Dysfunction Partially Through Systemic Inflammation in Patients with Metabolic Syndrome

Cheng-Wei Liu$^{1,2,3}$

$^1$Department of Internal Medicine, Taipei, Taiwan
$^2$, Taipei, Taiwan
$^3$Cardiology Division of Cardiovascular Medical Center, New Taipei City, Taiwan

Background

Hyperuricemia (HUA) has properties of inflammation and insulin resistance, therefore reportedly associating with left ventricular hypertrophy (LVH) and possibly associating with LV diastolic dysfunction (LVDD). The study was conducted to investigate the association among HUA, inflammation, insulin resistance and LVDD.

Material and methods

We enrolled patients with metabolic syndrome (MetS) between 2017/8/1 and 2017/12/31. All participants received fasting blood tests and underwent transthoracic echocardiography. LVDD and LVDD with elevated left atrial pressure (LAP) were defined by the contemporary guidelines (American Society of Echocardiography and the European Association of Cardiovascular Imaging). ELISA kits were used to measure protein expression of TNF-α and hs-IL6.

Results

The study consisted of 63 patients with mean ages of 53±14 yr, BMI of 29.4±4.0 kg/m2, eGFR of 92±24 ml/min, and 60% of male. The prevalence of HUA, LVH, LVDD, LVDD with elevated LAP were 40%, 18%, 41%, and 10%, respectively. Baseline characteristics were similar in the two groups, except that the HUA group had significantly greater values of hs-IL6 and TNF-α. LVDD with elevated LAP was greater in the HUA group (20% vs. 2.6%, P = 0.032). HUA was associated with LVDD with elevated LAP (crude OR: 9.25, 95% CI: 1.01-84.7, P = 0.049). In multivariate analyses, the true predictor of LVDD with elevated LAP was TNF-α other than HUA with adjustment for age, male, and BMI (adjusted OR for TNF-α: 4.1, 95% CI: 1.02-16.5, P = 0.047).

Conclusion:

Hyperuricemia was possibly associated with LVDD and elevated LAP through the TNF-α pathway other than insulin resistance in the MetS patients. (NCT03495999 at ClinicalTrial.gov)
Table 1. Baseline characteristics and laboratory data in the patients with metabolic syndrome

<table>
<thead>
<tr>
<th></th>
<th>Normouricemia</th>
<th>Hyperuricemia</th>
<th>P</th>
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</thead>
<tbody>
<tr>
<td>N=40</td>
<td>N=23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>52.3 (11.1)</td>
<td>54.8 (17.6)</td>
<td>0.395</td>
</tr>
<tr>
<td>Male</td>
<td>23 (61%)</td>
<td>15 (60%)</td>
<td>1.000</td>
</tr>
<tr>
<td>Body mass index (kg/m²)</td>
<td>29.4 (3.5)</td>
<td>29.4 (4.7)</td>
<td>0.929</td>
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<tr>
<td>Waist circumference (cm)</td>
<td>96.7 (8.4)</td>
<td>100.1 (13.6)</td>
<td>0.147</td>
</tr>
<tr>
<td>Uric acid (mg/dl)</td>
<td>5.4 (0.8)</td>
<td>7.5 (0.8)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Systolic BP (mm Hg)</td>
<td>132 (17)</td>
<td>134 (21)</td>
<td>0.685</td>
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<tr>
<td>Diastolic BP (mm Hg)</td>
<td>80 (11)</td>
<td>75 (11)</td>
<td>0.092</td>
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<tr>
<td>Glucose (mg/dl)</td>
<td>114 (24)</td>
<td>127 (49)</td>
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<tr>
<td>Glycosylated hemoglobin (%)</td>
<td>6.7 (0.8)</td>
<td>6.1 (2.7)</td>
<td>0.355</td>
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<td>Insulin (mIU/L)</td>
<td>18.4 (20.9)</td>
<td>16.6 (11.5)</td>
<td>0.699</td>
</tr>
<tr>
<td>HOMA-IR</td>
<td>5.1 (5.9)</td>
<td>5.2 (4.2)</td>
<td>0.945</td>
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<td>Total cholesterol (mg/dl)</td>
<td>168 (48)</td>
<td>176 (39)</td>
<td>0.396</td>
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<tr>
<td>HDL-C (mg/dl)</td>
<td>40 (10)</td>
<td>39 (11)</td>
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<td>LDL-C (mg/dl)</td>
<td>101 (30)</td>
<td>105 (33)</td>
<td>0.586</td>
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<td>Triglyceride (mg/dl)</td>
<td>167 (309)</td>
<td>199 (108)</td>
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<td>Creatinine (mg/dl)</td>
<td>0.9 (0.3)</td>
<td>0.9 (0.3)</td>
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<td>ALT (U/L)</td>
<td>34 (30)</td>
<td>33 (29)</td>
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<td>Hemoglobin (mg/dl)</td>
<td>14.0 (2.8)</td>
<td>13.7 (4.4)</td>
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<td>hs-CRP (mg/L)</td>
<td>0.20 (0.24)</td>
<td>0.39 (0.49)</td>
<td>0.077</td>
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<td>hs-IL6 (pg/ml)</td>
<td>2.20 (1.25)</td>
<td>2.98 (1.81)</td>
<td>0.048</td>
</tr>
<tr>
<td>TNF-α (pg/ml)</td>
<td>2.25 (0.80)</td>
<td>2.72 (1.02)</td>
<td>0.042</td>
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</tbody>
</table>

Figure 1. TNF- α other than SUA was significantly associated with LVDD with elevated LAP. Red solid circle = LVDD with elevated LAP; Green solid circle = normal LV diastolic function or LVDD. Vertical and horizontal dots line represents the mean of TNFα (2.4 pg/ml) and hyperuricemia (>7 mg/dl in men or >6 mg/dl in women), respectively.
Could the Paradoxical Embolism be a Possible Reason for Organic Affective Disorder and Pulmonary Embolism?

Emil Manov
Medica University Sofia, Sofia, Sofia, Bulgaria

Introduction: Paradoxical embolism is a rarely seen condition, which refers to the clinical phenomenon of thromboembolism, originating from the venous vasculature and migrating through an intracardiac shunt into the systemic circulation. The clinical presentation is diverse and potentially life-threatening. Usually this condition is very difficult to be recognized in the clinical practice and the most common cause is patent foramen ovale (PFO).

Aim: To represent a rare case of phyco-organic disorder with simultaneous systemic and pulmonary embolism, caused by a thrombogenic mass, entrapped in the PFO.

Clinical presentation: A 71 years old man was admitted in psychiatric department for third time because of frequent episodes of depression, anxiety and suicidal attempt after he had suffered two “cryptogenic” strokes. On the 10th day of his hospitalisation, complaints of dyspnoea and palpitations occured. After clinical evaluation and echocardiography, a band-shaped structure was revealed, entrapped in the PFO, that extended to both atria and partially obstructed both atrioventricular valves. A subsequent computer tomography of the chest and abdominal regions demonstrated: multiple thrombi in the main, lobar and segment branches of pulmonary artery (PA), besides the thrombus in the PFO, and several parenchymal spleen infarctions. After clinical discussion, cardiac surgery with thrombendarterectomy of PA, thrombectomy of the both atria and PFO closure was performed without complications.

Conclusion: This case demonstrates that in patients with psycho-organic syndrome and simultaneous clinical presentation of pulmonary embolism, the presence of intracardiac shunt should be considered and a consultation with a cardiologist is strongly recommended.
The Relationship Between Acute Coronary Syndrome Clinical Subtype and Mean Platelet Volume Levels

Banu Boyuk

Department of internal medicine, Turkey

Objective: We investigated the relationship between the mean platelet volumes of patients admitted to the hospital with acute coronary syndrome and clinical subtypes of acute coronary syndrome.

Material-Methods: Our study was a retrospective cross-sectional, single-center clinical trial. This study carried out total of 80 patients (%71,2 (n=57) male, %28,8 (n=23) female), who were hospitalized to Taksim Education and Research Hospital Coronary Intensive Care Clinic with acute coronary syndrome. Patients were divided into 3 groups STEMI (n = 23), NSTEMI (n = 39) and USAP (n = 18). The association of MPV with acute coronary syndrome subtypes and large routines assays was compared.

Results: The MPV average of the NSTEMI group was 8.86 ± 1.05, while the STEMI group was 9.11 ± 0.93 and the USAP group was 8.97 ± 0.85. There was no statistically significant difference between MPV and three clinical subtypes of acute coronary syndromes. A statistically significant difference was found between hypertension and MPV averages (p 0,01). MPV was found to be higher in diabetic patients, but there was no statistically significant difference between MPV and diabetic patients.

Conclusions: The conclusion of our study is that there are no three ACS clinical subtype associations of MPV levels in predicting cardiovascular diseases in patients with ACS. Based on the MPV level, prospective studies are needed to find that antiaggregan therapy is more comprehensive and patient population is more likely to block the risk of cardiovascular events.
Non Pharmacological Interventions For Optimal Cardiovascular Health - Confessions Of An Integrative Cardiologist

Dennis Goodman  
*Preventative and Integrative Medicine, Cardiology Division, New York, New York, USA*

There are tens and thousands of supplements! It is over a $50 billion industry in the US. This presentation will address ways in which we can navigate the maze of information and determine truth from fiction, science from pure marketing. Dr. Goodman will discuss several key supplements that play a special role in field of cardiology and diabetes including magnesium, vit K2, CoQ10, Omega 3s and Probiotics. He will discuss natural alternatives to statins – which ones are most helpful in lowering LDL cholesterol. Also discussed are pros and cons of lowering cholesterol and how low to go. The debate continues and Goodman will present current data from both sides. He will review the benefits of assessing MTHFR and implications for treatment. He will discuss role of stress in cardiovascular disease. He also discusses his role as Director of Integrative Medicine at NYU and his mission (and the challenges) to facilitate dialogue between Western and Integrative/Holistic Medicine so we can offer patients the best of both.
Pericardial Effusions in Patients with Obstructive Sleep Apnea without Pulmonary Hypertension

Emil Manov
Internal medicine "Kirkovich", Sofia, Sofia, Bulgaria

Background: Pericardial effusions in chronic hypoxemic lung diseases usually occurs after the development of severe pulmonary arterial hypertension (PAH). However, data about the frequency of pericardial effusions in obstructive sleep apnea syndrome (OSA) without PAH are still scarce and their pathogenesis is unclear.

Aims: To assess the prevalence of pericardial effusions, their volume and location in patients with obesity and OSA syndrome without PAH and/or hypoxemia.

Methods: We included 279 patients (162 males) with newly diagnosed OSA syndrome, mean age 42.8 ± 12.4 years, mean body mass index 37.3 ± 7.8 kg/m². OSA was confirmed by polysomnography. Main exclusion criteria were: Concomitant inflammatory diseases, thyroid dysfunction, day-time hypoxemia, nephrotic syndrome, left ventricular systolic dysfunction and PAH.

Results: Pericardial effusion was found in 102 (36.56%) - all of them with moderate to severe OSA syndrome. The mean effusion volume was up to 250 ml. In 36 patients (35.3%) the pleural effusion was diffuse, in 42 (41.2%) –in front of the right atrium and the right ventricle and in 24 (23.5%) - in front of the right cardiac cavities and the left atrium. We found significant positive correlation between presence of pericardial effusion and: Apnea-hypopnea index, body mass index (r = 0.473, p<0.001), desaturation time during sleep.

Conclusion: Pericardial effusion in patients with obesity and moderate to severe OSA syndrome without daily hypoxemia and/or PAH is a relatively common finding. Occurrence of pericardial effusions is dependent mostly on the OSA grade, the degree of obesity and the duration of sleep desaturation.
The introduction of a TeleECG Service will provide small rural communities and health services in north east Victoria with access to contemporary best practice methods and support to improve the diagnosis, assessment and management of patients presenting with chest pains.

The service will support the capacity of rural and remote Urgent Care Centres (Centres) in the Hume Region of Victoria that are staffed by trained nursing personnel. Medical practitioners are available, but not on site.

Patients presenting with chest pains to the Centres frequently present complex histories and confusing diagnostic dilemmas. The crucial process in the early assessment of people with chest pains is the undertaking of a diagnostic ECG.

A chest pain management algorithm (Hume Algorithm*) has been introduced to 37 sites in the Hume region. This is a condensed version of the Australian and New Zealand guidelines for management of acute coronary syndromes revised in September 2016(**).

This innovative TeleECG project includes the provision of a digital ECG machine at the Centres with a printout ECG; the transmission of the ECG to a centralised server at Northeast Health Wangaratta, with the ECG being visible on the computer in the regional Emergency Department and in proximity to the TeleHealth Service screen, which supports these rural and remote Centres. A senior clinician will be available 24/7 at Wangaratta, Albury and Goulburn Valley to interpret the ECG and discuss management options with nursing staff and the medical practitioner in the Centre.
Reperfusion Challenges for Stemi Patient in a Remote Eastern Part of The Indonesian Archipelago

Prijander Funay¹,³
¹Departement of Internal Medicine, Kupang, Nusa Tenggara Timur, Indonesia
³Department of Internal Medicine, Jakarta, DKI Jakarta, Indonesia

Background: Reperfusion therapy still remains as the cornerstone strategy for ST-segment elevation myocardial infarction (STEMI) patient. However, challenges might be encountered in remote areas, such as geographical difficulties in transferring patient to the primary percutaneous coronary intervention (PCI)-capable hospital. This study aimed to investigate the outcomes of clinical management in STEMI patients in archipelagic provinces who were referred to the provincial hospital without PCI facilities.

Methods: A cohort retrospective observational study was conducted in Prof W.Z Yohannes hospital Kupang, Indonesia. Data were extracted from medical records of STEMI patients, who’s hospitalized between January 1, 2016, and December 31, 2016. The data were then followed up to 6 months onwards.

Results: A total of 82 STEMI patients were eligible to be included in the study. The average age of patients was 55.05 years, and 18.3 % of them were women. Four (4.8 %) patients were treated with thrombolysis, while others received only conservative therapy. Nineteen (23.1%) patients died. First medical contact (FMC) was significantly associated with Heart Failure (HF) (p = 0.026), while transfer time was significantly associated with mortality (p = 0.033). During the median follow-up of 6 months, the readmission for HF was 20 (24.4 %) patients and recurrent STEMI was seen in 12 (14.6 %) patients.

Conclusion: Geographical difficulties and limited access to the PCI-capable hospital cause STEMI patients received conservative therapy only. The delay of FMC and referral to the provincial hospital are related to the increased chance of mortality and HF complication.
Influence of the Presence of Thrombus in the Occlusion Device on Ischaemic Events after LAA Closure (The Iberian Registry II).

Jose Ramon Lopez-Minguez

Interventional Cardiology, Badajoz, Badajoz, Spain

Background: Left atrial appendage closure (LAAC) is a therapeutic option for patients with nonvalvular atrial fibrillation and a contraindication for anticoagulants. There is some controversy about whether the presence of thrombus in the occlusion device in patient’s undergoing LAAC is a predictor of stroke.

Aims and Methods: In the Iberian Registry-II, 598 patients were recruited from 13 hospitals between March 2009 and December 2015. Percentage of ACP, Amulet or Watchman devices was 46.5%, 34.9% and 18.6%, respectively. We analyzed the incidence of thrombus in the device.

Results: Incidence of thrombus in the device was 4.7%. No significant differences were found between non-thrombus and thrombus groups regarding prior stroke (31.2 vs 37%), age (74.2±8.1 vs 73.7±7.4), CHADsVASc (4.4±1.5 vs 4.5±1.8) or permanent atrial fibrillation (51.1% vs 59.3%). Patients with thrombus in the device had a higher incidence of stroke (11.1 vs 2.8%; p=0.049). The incidence of thrombus was significantly higher in the ACP device compared with the AMULET (7.6 vs 2.4%; p=0.019) or Watchman devices (0-9%; p=0.013), without significant differences between the last two (p=1.000).

In multivariate analysis, prior stroke (OR: 2.5; p=0.05) and the presence of thrombus in the device (OR: 4.2; p=0.033) were independently related to the incidence of stroke during the follow-up. The presence of leakage (9.4%) was not related.

Conclusions: History of stroke and presence of thrombus in the device are related with a higher incidence of stroke during follow-up after LAAC. Amulet and Watchman devices seem to have a lower incidence of thrombus compared with ACP.
A 45-year-old woman, treated for several years for resistant hypertension, was admitted to ICCU due to another hypertensive crisis. Extensive diagnostics procedures excluded secondary causes of arterial hypertension and a device was implanted to create a therapeutic external iliac arteriovenous fistula. The increase of blood pressure in the pulmonary artery was observed a month after and the therapeutic fistula was closed. Therapy with seven hypotensive drugs was continued, and blood pressure values ranged from 160 to 220/90 to 120 mmHg. It was suspected that the patient was not taking the recommended drugs. The blood samples were collected to determine the concentration of the hypotensive agents. Blood serum was analyzed by means of high-performance liquid chromatography (HPLC), liquid chromatography–mass spectrometry (LC-MS) and liquid chromatography–tandem mass spectrometry (LC-MS/MS) for the presence of bisoprolol, chlorthalidone, clonidine, doxasin, furosemide, nitrendipine, valsartan, oxazepam and atorvastatin. Only oxazepam and atorvastatin were found in the serum collected on the day when the patient took the drugs on her own. Taking into account all medical history we diagnosed the factitious disorder (Munchausen syndrome), in which the patient feigns or produces symptoms with the aim of adopting the sick role. The patients usually have good knowledge about disorders they feigns, therefore they can be very convincing and hard to identify, even for experienced clinicians. The affected person exaggerates or creates of illnesses in themselves to gain examination, treatment and sympathy from medical personnel. This disorder is difficult problem for physicians because disrupts the normal physician-patient relationship, which is based on trust.
Percutaneous Vertebroplasty and Risk of Venous Thromboembolism in Patients with Vertebral Compression Fracture: A Nationwide, Population-based Case-control Study

Ching-Hui Huang

Department of Internal Medicine, Division of Cardiology, Taiwan

Background: Percutaneous vertebroplasty (PV) is a therapeutic procedure for vertebral compression fracture. Venous thromboembolisms (VTE) have been reported as procedure complications. The relationship between PV and the risk of VTE is unclear.

Methods: We conducted a retrospective, population-based case-control study using the National Health Insurance Research Database (NHIRD) to investigate the relationship between vertebral compression fracture patients receiving PV and risk of VTE. We identified 1,639 patients with receiving PV and 14,887 subjects without receiving PV from 2000 to 2013. After development of 1:1 propensity score-matched cohort study, 1639 PV patients and 1639 control patients were followed up for more than 12 years. Using the application of PV as the exposure factor, cause-specified Cox’s proportional hazard model was performed to examine the association between PV and VTE. We used three different adjusted models, including covariate adjustment using the propensity score, traditional measured confounders and confounder selection model using backward elimination procedure.

Results: The incidence and risk of VTE between patients receiving PV and matched participants were insignificantly different after propensity matching and using three different adjusted models. In the subgroup analyses, age, sex, comorbidity and cancer were not to increase the risk of VTE between the two cohorts. However, vertebral compression fracture patients with the history of heart failure, arrhythmia, cancer, with using antihypertension medications, and aged were significantly increase the risk of VTE regardless receiving PV or not, and patients receiving analgesic drugs decreased the risk of VTE.

Conclusion: Vertebral compression fracture patients who received PV seems not to increase the risk of VTE, but should be monitored cautiously in subgroup prone to developing VTE.

Key Words: Percutaneous vertebroplasty, venous thromboembolism
Objective. The study aimed to examine the prevalence and dynamics of cardiovascular disease risk factors during 4 year’s time span in train crew.

Material and methods. 100 train drivers and their assistants aged 25-59 years (mean (M±SD) 43.8±10.3 yrs) underwent inpatient periodic assessment including Holter monitoring of heart rate and blood pressure (BP), carotid ultrasonography and standard biochemical markers. 53 patients were studied twice (in 2013 and 2017).

Results. Elevated BP (mild or moderate arterial hypertension (AH) stage I-II) had 78 patients, mean disease duration was 10.4±4.3 yrs, time of onset - 37.0±8.5 yrs. The most prevalent risk factor was dyslipidemia: 59% of subjects had elevated triglycerides (TG) value ( 1.7 mmol/L) and 44% had hypercholesterolemia (total cholesterol 5.0 mmol/L). 39% of train drivers reported smoking, 37% had excessive body weight and 41% have been obese. Correlation analysis revealed significant direct association TG to body mass index, glucose intolerance and BP, but inverse – to smoking status.

After 4 year follow-up the negative dynamics of lipid profile was seen in 25-39 yr’s group and morphological features (nonobstructive atherosclerotic plague in carotid artery) – in 40-49 yr’s group. In patients aged 50-59 yrs all parameters were stable.

Mean systolic and diastolic BP at day and night lay within normal range in all age groups with ‘non-dipper’ circadian profile.

Conclusion. The most prevalent risk factors in train drivers were dyslipidemia and obesity. The target BP values achieved with antihypertensive medication allow considering AH as a controlled risk factor in train crew.
Changes in Medication Prescribed After Acute Myocardial Infarction by Internists Advancement in the Course of Last 15 Years

Zdenek Monhart
Internal department, Znojmo, Czech Republic

Background: Current guidelines for management of myocardial infarction recommend long term dual antiplatelet therapy, along with the lipid lowering drugs, beta-blockers and ACE inhibitors or angiotensin-2 receptor blockers. This pharmacotherapy can positively affect outcome of myocardial infarction patients. Treatment strategies should not differ between cardiologists and non-cardiologists.

Design: We analysed prescribed medication of patients discharged with confirmed acute myocardial infarction from internal department in district hospital. Prescription rates of antiplatelet therapy, statins, beta-blockers, ACEI or ARB in years 2003, 2007, 2011 and 2017 were evaluated.

Results: Prescription rates of evidence-based medications were as follows: aspirin: 78 % in 2003, 84 % in 2007, 94 % in 2011 and 99 % in 2017, the second antiplatelet agent (represented by ticlopidin or clopidogrel or ticagrelor): 47 %, 71 %, 86 % and 98 %, statin: 55 % in 2003, 71 % in 2007, 90 % in 2011 and 95 % in 2017, beta-blocker: 64 %, 74 %, 83 % and 87 %, and ACE inhibitor or angiotensin-2 receptor blocker: 64 % in 2003, 65 % in 2007, 81 % in 2011 and 85 % in 2017.

Conclusion: Prescription rates in our survey markedly increased during the last 15 years with regard to antiplatelet therapy, as well as prescription rates of statins and other secondary preventive drugs. Substantial improvement of pharmacotherapy prescribed by internists after myocardial infarction was observed. Repeated evaluation of prescription rates can be used to measure and improve quality of care.
A Study of Prevalence of Iron Deficiency in Heart Failure Patients from Two Centres in India

Simran Sawhney

Internal Medicine, New Delhi, Delhi, India

Objectives: The prevalence of iron deficiency is concerning in patients with heart failure. Very limited data is available regarding it in developing nations like India. Treating iron deficiency irrespective of anaemia status results in improved clinical outcomes and decreased morbidity.

Methods: Heart failure patients (n=375) from two centres in New Delhi, India were selected and they underwent laboratory evaluation including haemoglobin concentration, serum iron, TIBC, serum ferritin.

Results: 375 patients with heart failure (mean Hb-10.66g/dl) were enrolled in the study. 273 out of 375 (72.8%) were found to be anaemic. Out of 375 patients, 193 (51.4%) were diagnosed with iron deficiency. In the anaemic group, iron deficiency was present in 162 patients (59.34%). In the group of patients without anaemia (102 patients), iron deficiency was present in 31 patients (30.39%)

Conclusion: Iron deficiency is present in majority of anaemic patients. A substantial number of patients without anaemia were found to be iron deficient. Intravenous iron replacement in patients of heart failure with iron deficiency should be done.
Positive Effect of Anti-HMGB1 Protein in Experimental Myocardial Infarction

Olga Pechanova

Institute of Normal and Pathological Physiology, Bratislava, Slovakia

High mobility group box 1 (HMGB1) is a DNA-binding protein associated with various pathological conditions such as cardiovascular disease, cancer, and ischemia/reperfusion injury. The aim of our study was to evaluate the effects of HMGB1 protein on biochemical and morphological parameters after experimental myocardial infarction (MI).

12-week-old WKY male rats used for the study were divided into following groups: shame operated WKY without MI, WKY with MI, WKY + IM+ anti-HMGB1 protein. In vivo model of experimental MI was induced by ligation of the left descending coronary artery and lasted for 20 min. Before reperfusion anti HMGB1 protein was administrated i.v. Animals survived 7 days after MI. For morphological parameters, the hearts were excised and used for TTC-staining procedure. NOS activity was determined by conversion of $^{3}$[H] Arginine to $^{3}$[H] Citrulline in the aorta and ischemic, border, and non-ischemic region of the heart. Markers of oxidative damage were measured spectrophotometrically. Cytokine levels were investigated using the Bio-Plex Pro Cytokine kit in the plasma.

Administration of HMGB1 protein led to reduction of infarct area in the heart as well as it decreased the area of border region. Simultaneously, anti-HMGB1 protein increased NOS activity in both ischemic and border parts of the heart and in the aorta. It significantly decreased TNF-alpha and IL-6 level in the plasma.

Considering our results, HMGB1 protein is a promising molecule for reduction the negative effects of the myocardium infarction, as well as for improving the conditions associated with cardiovascular diseases.

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Thromboembolic and Bleeding Complications in Patients with Mechanical Heart Valve at Princess Marina Hospital

Elizabeth Botsile  
*Internal Medicine, Gaborone, south East, Botswana*

**Introduction:** Warfarin is the only anticoagulant used to prevent thromboembolic complications in patients with mechanical heart valves. The main challenge of warfarin use is its narrow therapeutic window and multiple drug interactions. As a result, the use of warfarin is increases the risk of both bleeding and thromboembolism.

**Objectives:** To describe thromboembolic and bleeding complications among patients with mechanical heart valves at Princess Marina Hospital (PMH).

**Methods:** A cross-sectional descriptive study was conducted among patients with mechanical valves at PMH between September 2017 and January 2018. Socio-demographic factors, duration of warfarin use, level of anticoagulation, and a history of any bleeding or thrombotic episodes were documented. The study also described factors associated with bleeding and thrombotic complications.

**Results:** The study enrolled 142 patients, whose mean (SD) age was 42 (12) years. Majority of participants (56%) resided in Gaborone and had used warfarin for a median (IQR) duration of 4(1.8 – 10.0) years. The median (IQR) TTR was 29.8(14.1-51.0) % and only 14.8% of the patients had a good anticoagulation control. A total of 109(76%) of patients experienced bleeding during their warfarin use. The rate of major bleeding was 1.5 per 100 person-years. The rate of thromboembolic complications was 2.80 per 100person-years. Thromboembolic events were more common among people in Gaborone than those from outside the city (P 0.04) and patients with a longer duration of warfarin use (p=0.01). A longer duration of warfarin use was also associated with an increased risk of bleeding (p=0.008).

**Conclusion:** Warfarin is associated with poor anticoagulation control and high bleeding, thromboembolic complication rates. More efforts are needed to improve the patient anticoagulation control and reduce warfarin associated complications.
**Functional Autoantibodies Against the β1-Drenoceptor in Dilated Cardiomyopathy: New Therapeutic Options**

**Gerd Wallukat**  
*Clinical Research, Berlin, Berlin, Germany*

Agonistic Autoantibodies (AABs) against the β1-adrenoceptor (β1-AR) may play an important role in the development of the idiopathic dilated cardiomyopathy (DCM). These functional AABs recognize epitopes localized on the first or second extracellular loop of the β1-AR. In contrast to classical β-adrenergic agonists, the β1-AR AABs did not desensitize the β1-AR. The AABs stimulate the β-AR permanently. This AAB associated adrenergic overdrive could be the reason for the development of DCM. Therefore, we removed the AABs using the immunoadsorption (IA) as a new therapeutic option. The treatment of the AAB positive DCM patients with IA caused a long lasting disappearance of the AABs and an improvement of the cardiac function. The ejection fraction (EF) increased from 24% to nearly 40% within one year after the IA. Moreover, we observed a prolongation of the 5 years survival rate of DCM patients. In the DCM group without IA only 26% survive. In the group with IA 69% survive. Another option is preexisting in the use of aptamers neutralizing in vivo the AABs directed against the β1-AR. We identified aptamers that neutralize the functional AABs in vitro and in vivo. In animal experiments we could be show that the treatment with aptamer BC007 caused a disappearance of the AABs. In a clinical phase I study BC007 did not developed any critical side effects and caused also a disappearance of AABs. Therefore, we assume that the aptamer BC007 represent a new therapeutic tool to treat AAB positive patients with DCM.
Functional Autoantibodies Against the β1-Adrenoceptor in Dilated Cardiomyopathy: New Therapeutic Options.

Gerd Wallukat

Clinical Research, Berlin, Berlin, Germany

Agonistic Autoantibodies (AABs) against the β1-adrenoceptor (β1-AR) may play an important role in the development of the idiopathic dilated cardiomyopathy (DCM). These functional AABs recognize epitopes localized on the first or second extracellular loop of the β1-AR. In contrast to classical β-adrenergic agonists, the β1-AR AABs did not desensitize the β1-AR. The AABs stimulate the β-AR permanently. This AAB associated adrenergic overdrive could be the reason for the development of DCM. Therefore, we removed the AABs using the immunoadsorption (IA) as a new therapeutic option. The treatment of the AAB positive DCM patients with IA caused a long lasting disappearance of the AABs and an improvement of the cardiac function. The ejection fraction (EF) increased from 24% to nearly 40% within one year after the IA. Moreover, we observed a prolongation of the 5 years survival rate of DCM patients. In the DCM group without IA only 26% survive. In the group with IA 69% survive. Another option is preexisting in the use of aptamers neutralizing in vivo the AABs directed against the β1-AR. We identified aptamers that neutralize the functional AABs in vitro and in vivo. In animal experiments we could show that the treatment with aptamer BC007 caused a disappearance of the AABs. In a clinical phase I study BC007 did not develop any critical side effects and caused also a disappearance of AABs. Therefore, we assume that the aptamer BC007 represent a new therapeutic tool to treat AAB positive patients with DCM.
Constrictive pericarditis is a classification of pericarditis, being the tuberculous etiology a rare condition and difficult to diagnose due to the non-elevated sensitivity of diagnostic methods, but the most common in tropical and developing countries due to the high incidence of Mycobacterium tuberculosis. This case report presents a Brazilian 36-year-old male patient, previously treated for pulmonary tuberculosis, presenting with chest pain, late evening fever, night sweats and pericardial friction on cardiac auscultation. The anatomical diagnosis was confirmed by echocardiographic examination and the etiological diagnosis by epidemiological data, with a good response to specific treatment. The present study highlights the importance of being considered the diagnostic hypothesis of this rare condition, collaborating for the appropriate treatment in a timely manner, avoiding delay to start the same.
On Education in Internal Medicine: Example with Idiopathic Hypertension Incl. Cerebral Apoplexy

Eva Neu

Pharmaco-Physiology, Muencchen, Germany

Introduction: Since discovery of blood-circulation (William HARVEY 1628) about cellular (Claude BERNARD), blood-pressure (Walter CANNON) & blood-volume-homeostasis (Otto-H. GAUER) exists enormous information, but till today genuine hypertension pathogenesis incl. apoplexy cerebri (HIPPOCRATES) is not clarified.


Results: (recent/earlier): Relation of spontaneous-phasic (SPC: 0.5-2/min)&periodic slow-tonic contractions (STC: 0.1-0.2/min) induced by hormones (angiotensin-II/5-HT/PGs/vasopressin=VP) in rat-aorta&human-renal/ovarian-uterine-arteries, also motor-oscillations in cerebral-basilar-artery (rat) to SPC-STC in urogenital-tract (vesical&myometrial) and to low-frequency blood-pressure-fluctuations (Mayer-waves) & pericytes, is not investigated. Importance of SPC-STC for BP-reactions (normal/spinal rats: decapitation & artificial respiration&thermoregulation) is not clear. Nicotine/0.1-10mg/kg & mercaptoethylguanidine/MEG: NO-synthase-inhibitor/200-300mg/kg induce transformation of acetylcholine-depressor-response=dR, also of electrical-central-vagal-stimulation (CVS:55Hz,2ms,5s,5V), into biphasic depressor-pressor=dR/pR, potentiate pR of non-/AHR-600/McN-A-343 & nicotine-like/DMPP: 0.1µg-100mg/kg ganglion-stimulating agents, invert serotoninergic-dR into pR, potentiate VP-pR/5-100mIU, also bradykinin-dR/1-20µg/kg. On bronchodilators & tocolytic β-sympathomimetic-therapy: Adrenaline-contractions (rat-aorta/portal-vein), also frequency of electrical-spike/burst activities (intracellular rec./vesical-myocytes) are decreased after buphenin=B&Fenoterol=F/10nmol-1µM. After B/1mg/kg&F/0.05-0.20mg/kg cardiac&respiratory-frequency in rats&cats are increased, blood-pressure decreased, correlated with EEG-patterns-synchronization in cats (stereotaxically-implanted electrodes: hippocampus/ hypothalamus posterior/nucleus-tractus-solitarii).

Open questions. Kind of interaction between MEG-Nicotine&chemical-structure of:

1. CNS-types from nicotinic-cholinergic-receptors (=nACHRs, types alpha-42-beta23)?
2. 5-HT1-7 receptors (G-protein-coupled), 5-HT1a-f/5-HT2a-c/5-HT7?
3. Neuronal VPR1b&vascular VPR1a receptors?
4. Kind of neuronal β-receptors responsible for electrical-effects of B&F?

Conclusion: Results support hypothesis of 3-pathogenetic-mechanisms of idiopathic-hypertension: Neuroeffector-sensitization of regulatory-structures by endogenic/exogenic-factors:

a. Central adrenergic/cholinergic-neurons (CNS:formatio-reticularis/hypothalamus),
b. Preganglionic sympathetic-neurons (nicotinic-cholinergic-receptors: nACHRs),
c. Vascular effector-cells (myocytes/endothelial),
d. dR/pR cause probably cardiac&cerebral angiospasms.

An integrative internal medicine could open new dimension for antihypertonic-therapy. Future education&research in internal-medicine needs holistic and multidimensional considerations counteracting ultra-specialization.
An Analysis of the use of the RDW as a Biomarker in a Cohort of HFrEF Patients Treated with Sacubitril/Valsartan

Carlos Lopera Marmol
Internal Medicine, Mataro, Barcelona, Catalonia, Spain

Objectives: To analyze the use of RDW as a biomarker in a cohort of patients with heart failure with reduced ejection fraction (HFrEF) treated with Sacubitril/Valsartan.

Methods: We analyzed 36 patients of our hospital Heart Failure Unit Sacubitril/Valsartan cohort with a mean follow-up of 10 months.

Results: Our cohort mean age was 72.1 years and 73.5% were male. Hypertension (85.3%), type II diabetes (67.6%) and dyslipidemia (41.2%) were the commonest comorbidities present. A total of 41.2% had atrial fibrillation. Most of the patients had dilated cardiomyopathies (the majority being secondary to ischemia or alcoholism).

Before starting treatment with sacubitril/valsartan 61.3% patients were treated with ACE inhibitors and 33.3% with ARBs, 88.9% of the patients were receiving β-blockers and 80.6% aldosterone blockers. During the follow-up, 3 patients discontinued therapy; one as a result of hypotension, another due to an ulcerative colitis episode coincidental with the start of the treatment, which was notified to the Spanish pharmacovigilance authorities. The third patient stopped the treatment for financial reasons.

After completing six months of treatment, 13 and 19 patients had a reduction of the of the RDW-SD and the RDW-CV respectively, without statistical significance (p0.09).

Conclusion: Although Sacubitril/Valsartan has demonstrated efficacy in reducing morbidity and mortality in HFrEF patients (PARADIGM-HF Trial) and reductions in NT pro-BNP have been described, there were no reports on RDW change (a valid predictor of outcome in HF patients). Our study did not find statistically significant differences in the RDW values after starting the treatment.
Loading Dose of Atorvastatin Before Intracoronary Intervention Provide Protective Effect in Patients with Chronic Total Occlusion of Coronary Arteries

Konstantin Nikolaev
Urgent care, Novosibirsk, Outside of US, Russia

To analyze the effect of atorvastatin loading dose on the reduction of myocardial injury associated with percutaneous coronary interventions in patients with endovascular recanalization of chronic total occlusions.

Methods: 82 patients with chronic total occlusion of coronary arteries underwent recanalization. The patients in the main group (n=38) received a loading dose of atorvastatin 80 mg before surgery. Patients in control group (n=44) received 20 mg of atorvastatin. In both groups troponin I and CF fraction of creatine phosphokinase were measured prior to surgery, 24 hours, 1 month, 1 year after the surgery. There were no lethal outcomes in both groups during the entire follow-up period.

Results: There was no difference in TnI and CF-KPK initial levels. The average troponin I level was 0,41±0,23 ng/ml in the main group and 0,24±0,14 ng/ml in the control group. There wasn’t TnI rising 24 hours after the surgery in the main group – 0,50±0,35 ng/ml, in the control group significant TnI level rising was noticed – 5,38±13,99 ng/ml. In 1 month and 1 year TnI level was normal (1st group – 0,33±0,21 ng/ml, 2nd group – 0,25±0,17 ng/ml; 1st group – 0,31±0,22 нг/мл, 2nd group – 0,32±0,21 ng/ml). In the main group 24 hours after surgery CF-KPK was normal – 3,02±1,42 ng/ml. There was significant CF-KPK rising in the control group – 7,55±11,84 ng/ml. In 1 month and 1 year CF-KPK level was normal in both groups (1st group – 2,31±1,24 ng/ml, 2nd group – 4,09±2,45 ng/ml; 1st group – 2,53±1,56 нг/мл, 2nd group – 2,61±1,59 ng/ml).

Conclusion: Atorvastatin loading dose 80 mg before chronic total occlusion recanalization prevents periprocedural myocardial injury in patients with chronic total occlusion of coronary arteries.
Are there sex differences in association of body fat distribution and coronary plaque composition? A virtual histology intravascular ultrasound study

Hong Seok Lim
Cardiology, Suwon-Si, Gyeonggi-Do, South Korea

Background: Body fat distribution, especially central fat accumulation is more relevant to coronary atherothrombosis than total body fat itself. We aimed to evaluate the associations between body fat distribution and coronary plaque composition in both sexes.

Methods: Total and regional body fat were measured using dual-energy X-ray absorptiometry in 62 patients who underwent coronary angiography. We evaluated the in-vivo coronary plaque characterization using intravascular ultrasound virtual histology in 79 lesions with moderate stenosis. Cross-sectional measurements of the plaque at the region of interest and the percentage of 4 different plaque components (fibrous, fibrofatty, dense calcium, and necrotic core) were compared with the body fat distribution in both sexes.

Results: The percentage total body fat mass (%FM_total) had no association with plaque composition in both sexes. In female patients, percentage truncal fat mass to total body fat mass (%FM_trunk/FM_total) and percentage truncal fat mass to fat mass of extremities (%FM_trunk/FM_ext) showed significant correlations with %fibrofatty area ($r=0.527$, $p=0.030$; $r=0.533$, $p=0.028$, respectively). Male patients showed no association between any plaque compositions and body fat distribution, however, %FM_trunk/FM_total and %FM_trunk/FM_ext revealed significant correlations with %necrotic core area ($r=0.453$, $p=0.045$; $r=0.538$, $p=0.014$, respectively) in those with metabolic syndrome.

Conclusions: Body fat distribution is associated with coronary plaque composition with different patterns in both sexes. %FM_trunk/FM_total and %FM_trunk/FM_ext representing central fat distribution are closely related to the lipid-rich plaque in female and metabolic syndrome male. More intensive therapeutic interventions are essential for high central fat distribution in these patients population to prevent acute coronary events.
Changing of Aorta and Myocardial Elastic –Performance In Hemodialysis Patients;

Cem Koz¹

Cardiology, Ankara, Turkey, Turkey

**Introduction:** Altering volume load and chronic inflammation is an important finding in hemodialysis patients. The effects of toxic substances on the cardiovascular system that accumulate with renal dysfunction are destructive. Our study aimed to investigate aortic and myocardial changes with non-invasive methods.

**Material Methods:** Total 182 patients; group 1. (hemodialysis, n=73 ), (34 male , 39 female), group 2. (Control, n=109), (56 male, 53 female), group 2. Collected from consecutive cardiology out-patient policlinic. Echocardiographic evaluation; ascending aorta systolic and diastolic diameter from the 3 cm distal of the aortic valve was recorded.  Blood pressure was measured in the supine position with the standard sphygmanomanometer. The elasticitic property of the aorta and myocardial performance index (MPI) were measured and calculated according to the literature.

**Results:** Between the groups, there was no difference found on arthropometric and measured parameters (BMI, sex, age, systolic and diastolic blood pressure, aortic diameter, p 0,05). Aortic distensibility, aortic strain and left ventricular myocardial performance index (MPI) were significantly different between two groups (p0,05). MPI in hemodialysis was not correlated with duration of treatment.

**Discussion:** Our finding are similar to the literature, our study revealed that unless the uncontrolled volume statistically different from the cardiology out-patient MPI, aortic elastic properties. However, these findings may be explained with higher volume changing in hemodialysis patient and toxic effects of the chronic renal failure excessive substance. We try to exclude highly decreased volume after dialysis and with 12 hours fasting state of controlled patients.
The Spectrum Of Rheumatic Mitral Valve Regurgitation Presenting To Inkosi Albert Luthuli Central Hospital, Kwa-Zulu Natal Over A 10 Year Period

Nomthandazo Zwane
Cardiology, Durban, Kwa-Zulu Natal, South Africa

Background: Recent evidence suggests that there is a change in the profile of rheumatic mitral regurgitation (MR) in South Africa with more evidence of chronic fibrotic disease.

Objective: This study describes the demographics, clinical characteristics and outcomes of patients with rheumatic MR and determined whether the pattern of disease has changed.

Methods: A retrospective chart review was performed on patients 7 years and older with moderate/severe rheumatic MR referred to Inkosi Albert Luthuli Central Hospital from 2006-2015. Patients with isolated moderate-severe MR were selected for study.

Results: There were 320 patients meeting the study criteria, (mean age 22.2 ± 15.8 years, M: F 1:2). Severe dyspnoea was present in 45.9% (NYHA class III 37.1% and class IV 8.8%), heart failure in 117(36.6%), atrial fibrillation in 13.8%. Acute carditis was found in 34 cases (10.6%). Ten percent were HIV infected.

At echocardiography 23.8% had moderate and 76.2% had severe regurgitation. Leaflet thickening 135(62.5%), subvalvular disease 37(17%) and calcification 19(8.8%) was confirmed in 216 subjects who underwent surgery. In addition chordal elongation was identified in 63(29.2%), ruptured chordae in 41(19%) and leaflet prolapse in 80(37%) at surgery. There were 32 deaths (10%) and of these 27(8.4%) died prior to surgery.

Conclusion: Contemporary patients with rheumatic MR in Kwazulu-Natal are young, with a significant burden of active carditis, severe valve damage, complications and mortality. There was little evidence of marked valve fibrosis and calcification. Key words: Rheumatic MR, rheumatic carditis, echocardiography, chordal elongation, surgery.
Currently, 17 million people worldwide are receiving antiretroviral therapy (ART) for human immunodeficiency viral (HIV) infection. There has been a dramatic decline in mortality from HIV infection in the last decade due to increased availability of ART. HIV-associated cardiac failure is on the increase, with more cases of diastolic dysfunction reported in the ART era. HIV increases the risk of CVD, because of longer survival on ART, ongoing subclinical inflammation, traditional cardiovascular risk factors and the complications of chronic ART use. HIV-associated CVD encompasses a wide spectrum of heterogeneous clinical entities, which include diastolic dysfunction, asymptomatic left ventricular dysfunction, cardiomyopathy, myocarditis, heart failure, myocardial fibrosis, myocardial steatosis, pulmonary hypertension, peripheral arterial disease, cerebrovascular disease, infective endocarditis, and cardiac neoplasms (e.g. Kaposi sarcoma and B-cell immunoblastic lymphoma). In this chapter, we review the complex association of HIV infection and CVD. We describe important recent developments and perspectives based on a systematic analysis of the important advances in this field published in the last decade.
Autoimmune Predisposition in Adult Patients with Down’s Syndrome

Maria Leonarda De Rosa

Translational Medical Sciences, Naples, Naples, Italy

Introduction: Autoimmune disorders (AD) have been reported in patients (p) with Down Syndrome (DS). Data of prevalence of organ specific and/or systemic AD, frequency of autoantibodies positivity in DS p are poor.

Methods: We studied retrospectively and observationally 20 p with DS. Anamnesis, physical examination and routine laboratory tests were performed in all p. 18 p were screened for organ specific diseases and 5 of them underwent complete immunological screening (IS)

Results: 20 DS p were examined, 10 males and 10 females, mean age 27.5 years. Of all p, 9 (45%) presented anti-thyroglobulin antibodies and 8 (40%) the anti-thyroperoxidase ones. Personal history of psoriasis, celiac disease and type 1 diabetes was reported by 2 (10%), 2 (10%) and 1 patient (5%) respectively. Out of 5 DS adults who underwent complete IS 2 showed ANA positivity, 1 positivity of Rheumatoid Factor and 1 presence of anti-histone antibodies. No anti-ds DNA antibodies were detected. Specific antibodies for celiac disease were identified in 1 p. For 3 of them complement protein levels were reduced. 3 out of 5 p had low numbers of CD 19 positive lymphocytes at cytofluorimetry while CD3 cells were in average normal range.

Conclusions: p with DS are more likely to be susceptible to AD, particularly endocrine or digestive diseases such as thyroid AD, type 1 diabetes, psoriasis, celiac disease. Considering the higher incidence of AD or subclinical AD, we recommend to perform, especially in DS p, IS in order to achieve early diagnosis thus preventing or limiting potential organ involvement.
Intravenous Access for Prehospital Pain Relief with Opioids – Time For a Change?

Tom Silfvast

Clinicum, anaesthesiology, Helsinki, Finland

Background: Severe pain in the prehospital setting is usually treated with intravenous (IV) opioids, although intranasal and buccal routes for opioid administration are available. We hypothesized that a significant part of IV lines currently inserted for pain relief in prehospital patients could be avoided.

Methods and results: We reviewed all prehospital patient charts in our ambulance service covering 1.6 million inhabitants. In 7497 (4.3 %) of the 172 555 ambulance missions in 2016, the patient received opioids. After excluding those who in addition to opioids received any other IV drug, fluids 500 ml or noninvasive ventilatory support, 4281 patients remained for analysis. Of these, 92.9 % received fentanyl only, 84.3 % of them (3352 patients) intravenously. 94.3 % of these patients belonged to the lowest acuity mission categories and were haemodynamically stable uncompromised patients. The indication for medication was fall while walking, back pain and abdominal pain in 74.2 %, and the dose of fentanyl was less than 0.1 mg in 70.8 % of the patients. There was no other or obvious need for prehospital intravenous access than this medication.

Discussion: A majority of the patients who received an IV line for prehospital pain management could have been managed without IV access. This could result in decreased prehospital time delays and costs. Intranasal naloxone is available for treatment of potential side effects.
Hypernatremia is common among hospitalized patients. Its severity lays in its clinical presentation and its potentially dangerous treatment.

Our goal was to describe the characteristics and treatment of these patients, as well as health care resources and their mortality.

Retrospective cohort with all adults patients admitted to the Emergency Department(ED) between January/2009 and December/2013 of Hospital Italiano de Buenos Aires. We included all who had hypernatremia on their early assessment and later required hospitalization; restricted to those affiliated to institucional health maintenance organization (PS). Data analysis was performed with secondary databases. Hypernatremia was defined as serum sodium =145mEq/L. All patients were followed from admission until discharge, death, disaffiliation or end of study. Time-to-event analysis was used.

During the study period there were 415683 consultations, of which 57552 required hospitalization; only 36178 were affiliated to PS. We included 122 cases of hypernatremia (prevalence 0.33%;95%CI:0.28-0.40%): 61.48% were female, with a median age of 81 (IQR 20), 49.18% were previously on Home Care and the average of time at the ED until hospitalization was 8.52 hours (SD 11.98). A high number of complementary studies were used as 97.54%(119) needed more than one of these: laboratory, ecography, CT scan and/or echocardiogram. In-hospital mortality rate was 32%. The global mortality rate (including follow up after discharge) was 35.25% at 30 days, and 40.16% at 90 days.

Hypernatremia is a severe hydroelectrolytic disorder with high mortality rate.
Pain is a frequent complaint in patients attending an emergency department (ED).

The purpose of this study was to estimate the frequency of pain complaint in ED, to describe its characteristics and the attention process in our primary level of health care.

We designed a retrospective cohort with all patients admitted to ED between October/2016 and September/2017 of Hospital Italiano de Buenos Aires (HIBA), Argentina. We selected a random sample of 400 patient’s consultations from secondary databases during the study period.

373 patients were analysed (27 patients excluded). Pain prevalence was 52.54% 95%CI:47.34-57.71 (196/373). Despite the presence of pain, electronic health records included pain assessment in 83.67%(164) of patients when registered by physician and only 12.24%(24) when registered by triage process. The most frequent pain locations were: 30.61%(60) abdominal, 15.82%(31) lower extremities and 12.76%(25) dorso-lumbo-sacral region; 86.22% was acute. Almost 20%(38/196) of patients with pain received some analgesic treatment on ED. Of these, the median time from admission at ED to medical attention was 46 minutes; median time between medical indication and the effective administration by nurse was 16 minutes. The most frequent routes of administration were: 52% intravenous and 21% intramuscular.

Triage evaluation plays a crucial role in the initial assessment and further care including analgesic treatment. However, pain intensity assessment is not always well registred. It is necessary to improve pain assessment.
**Introduction:** Internal medicine (IM) is interdisciplinary science and with fundamental importance for enormous health-problems of humanity. Creation of an integrative psychosomatic internal medicine (IPSIM) in context of a multidimensional & holistic therapy, founded by HIPPOCRATES-GALENUS-HUA T’UA-AVICENA-PARACELSUS is necessary to counteract disastrous human-situation.

**Conception:** Theoretical approaches about discussion for an IPSIM in context of psychosomatic are given. During Opening-Ceremony of 18th World-Congress Psychosomatic-Medicine (ICPM 2005 Kobe) were present their majesties Emperor & Empress of Japan, Prime & Ministers for Science-Education-others & prominent scientists. Emperor AKIHITO honored congress by strategical ideas, available also for all anthropological-health sciences: “total symptoms of mind & body, seeking ways of holistic care … it is extremely important for patients … my hope contributes … the progress of medical science and people’s happiness in the entire world.”

Yujiro IKEMI/Ex-President of ICPM opened new dimension not only in psychosomatic & psychiatry, but also in general medicine, pathophysiology & psychology by integration of oriental somatopsychic theory & self-regulation practices (Yoga/Qigong/Zen-meditation/etc.) with occidental psychosomatics (Th. von UEXKUELL).

**Conclusion.** Albert Szent-Gyoergyi/Nobelprice: Vitamin-C in biocatalysis: There is but one safe way to avoid mistakes: To do nothing, or at least to avoid something new: This, however, in itself may be the greatest mistake of all (in Bioenergetics: Foreword-1957). It is last time for paradigm change in scientific policy in context of IPSIM in IM supporting UNO-Agenda21 for better health-education-etc. on global level.
Pain Prevalence and Severity in Admission and Discharge in an Internal Medicine Ward

Gabriel Figueroa-Parra

Department of Internal Medicine, Monterrey, Nuevo Leon, Mexico

Introduction: Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage. The Joint Commission standards established that every hospital have a process to address pain assessment. We aimed to evaluate the prevalence and severity of somatic pain in the internal medicine ward of the university hospital “Dr. José Eleuterio González” in Monterrey, México.

Objective: Describe somatic pain prevalence and severity in admission and discharge.

Materials and Methods: We conducted an observational retrospective study involving all adult patients consecutively admitted from January to October 2017. We collect the pain assessment recorded in the electronic medical record in admission and discharge. Patients were divided into three groups according to numeric rating scale: mild (1-3), moderate (4-6) or severe (7-10). We also evaluate the diagnosis of patients with severe pain at any moment during hospitalization and were categorized in oncologic and non-oncologic.

Results: The final sample consisted of 2291 patients, in admission 318 patients (13.9%) reported pain, of whom 237 (74.5%) were mild, 72 (22.6%) were moderate and 6 (2.8%) were severe. At discharge 248 patients (10.82%) reported pain, of whom 191 (77%) were mild, 40 (16.1%) were moderate and 17 (6.9%) were severe. Of all the patients who reported severe pain at any moment during their hospitalization, 19 (35%) were oncologic and 35 (65%) were non-oncologic.

Conclusions: The pain prevalence in admission was 13.9% and discharge 10.82%, severe pain is more frequent in non-oncologic pathologies in our internal medicine ward.
Mucormycosis (MCM) is a serious invasive fungal disease (IFD) affecting people with impaired immunity or diabetes mellitus (DM). Since data related to MCM is lacking from Lebanon, we conducted a retrospective chart review at the American University of Beirut Medical Center (AUBMC) over a 10-year period between Jan 1, 2008 and Jan 10, 2018 to document the burden, treatment, and outcome of patients with MCM. The study was reviewed and approved by the Institutional Review Board at AUBMC. Case findings were based on the International Classification of Disease, Ninth revision (ICD-9) codes. Patients were classified as having probable or proven MCM based on the revised definitions of EORTC/MSG criteria.

Twenty patients were included, their median age was 49 years and the majority were males (70%). Most common comorbidities were hematologic malignancy (65%) and DM (35%) respectively while most common manifestations were rhino-orbital (35%) and pulmonary (20%) disease. Diagnosis was proven in 25% of cases (n=5) while the remainder (75%) were probable MCM (n=15). All patients were treated with a liposomal amphotericin B (LAMB) formulation, 11 patients received posaconazole, either in combination (n=5) or subsequently after discontinuation of LAMB (n=6). Fifteen patients (75%) underwent surgical interventions in addition to antifungal therapy. All-cause mortality was 60% but death was attributed to MCM in 4 cases only (20%), reflecting a high treatment success rate for MCM at AUBMC. Physicians must have a low threshold of suspicion in patients at risk since early diagnosis and treatment are essential to improve outcome.
Multidrug resistant organisms (MDRO) are associated with high morbidity, mortality, and increased costs of hospitalization. We analyzed the prevalence and patterns of antimicrobial resistance of MDRO at the American University of Beirut Medical Center (AUBMC) between January 2010 and December 2016 to better understand the epidemiology of these organisms. A retrospective review was conducted on the Infection Control and Prevention Program (ICPP) database at AUBMC which comprised culture results of all inpatients during the 7-year period. Organisms from both infected and colonized hospitalized patients were reviewed. Organisms from either hospital or community acquired infections/colonization were included. MDRO list included Methicillin Resistant Staphylococcus aureus (MRSA), Vancomycin Resistant Enterococci (VRE), Carbapenem Resistant Enterobacteriaceae (CRE), Multidrug Resistant Acinetobacter baumannii (MDR-AB) and MDR Pseudomonas aeruginosa.

A total of 12062 organisms were reviewed. *Escherichia coli* (*E. coli*) was the most frequently reported organism with a frequency of 43.4% (N=5239). Interestingly, 81.8% (N=721) of the *A. baumannii* isolates (N=881) were MDR compared to only 0.5% (N=8) of the *P. aeruginosa* isolates (N=1718). Only 2.7% of *E. coli* (N=140, total=5239) and 6.6% of *Klebsiella pneumoniae* (N=121, total=1835) were carbapenem resistant. MRSA was reported in 27% of the *Staphylococcus aureus* isolates (N=171, total=1060) and 1.7% of the *Enterococcus* species were vancomycin resistant (N=23 out of total=1329). The increasing MDRO trends require systematized interventions to limit the threats on patients. The interventions that were implemented at AUBMC by the ICPP team have been effective in controlling but not completely eliminating the transmission of MDRO.
Determinants of Poor Outcome and High Risk Diabetes Ketoacidosis (DKA) Patients in our Community

Afolabi Antonio¹

Internal Medicine, Lloydminster, Saskatchewan, Canada

Background: Diabetes Ketoacidosis is a very important complication of type 1 diabetes and sometimes type 2 diabetes. Prompt diagnosis and management can help prevent a negative outcome. Method/Aim: We studied patients who presented to our ER with DKA via charts review. All patients were completely anonymized. Indices studied included; GCS, PH, sepsis status, insulin compliance and other comorbidities. Poor outcome defined as death/need for ventilation and high risk patients as those requiring prolonged hospitalization/poor compliance pre-admission.

Result: 50 charts were reviewed. M= 20 F= 30. Age range= 16 to 68, median age = 30. All patients(100%) were given standard ICU care per local protocol. 4 patients were intubated because of low GCS 8, PH(6.1-6.9) and severe sepsis. 1 died and had positive urine toxicology and altered mentation for 72 hours prior to admission and they went into cardiac arrest eventually. The other 3 were transferred to tertiary centres and hospitalised for between 7-10 days. 1 of the 3 never knew they were diabetic, they also had Myocardial infarction with the DKA. The remaining 47(94%) responded to standard treatment, of which 7(14%) had prolonged hospital stay of 7 days because of difficulties managing their injections and glucose readings. In over 70%, either forgetting to take insulin or outright non-compliance was the reason for admission.

Conclusion: patients who do not comply with their insulin regime run risk of recurrent DKA and prolonged hospitalization. Young adults and those with intellectual and social issues also fall into this group. Poor outcome is determined by factors such as low GCS on admission, PH 7.0, comorbidities such as sepsis and substance abuse.
Modifiable Factors Associated with Uncontrolled Type 2 Diabetes Mellitus in a Developing Country: Experience of a Tertiary Care Hospital

Mohammad Mehfuz-E-Khoda

Nephrology and Dialysis, Dhaka, Bangladesh

Background: Diabetes mellitus (DM) is a non-communicable disease with increasing prevalence worldwide. The present study was done in a tertiary care hospital, to identify the modifiable factors associated with the poor glycemic control in Bangladeshi type 2 DM patient.

Methods: This cross-sectional study was conducted in the Department of Medicine, in a tertiary care hospital of Bangladesh from July 2014 to June 2015. A total of 140 adult type 2 DM patient were included in the study and were divided into 2 groups on the basis of glycated haemoglobin (HbA1c) [group1: HbA1c ≥ 7, n=70 and group 2: HbA1c  7, n=70].

Result: In this study, significant positive association of higher mean age (p=0.05), mean duration of DM (p=0.0006), waist-hip ratio (p=0.013), poor economic condition (p 0.05) and smoking (p=0.00038) was found among the group 1 patients. Moderate physical activity was significantly (p=0.018) associated with good glycaemic control. Mean Body-mass-index of group 1 (23.73±4.72 kg/ m²) and group 2 (23.87±4.86 kg/ m²) were almost equal. Visit with specialist physician was more frequent among group 1 patients (p=0.011). Most of the patients in group 1 were irregular in dietary habit (58.6%) and exercise (67.1%). Also increased intake of refined sugar (60%) was major contributory factors of poor glycaemic control.

Conclusions: Low socioeconomic condition, irregular dietary habits irregular exercise, smoking and intake of refined sugar were the major modifiable factors that contribute to poor glycaemic control. Elderly age and longer duration of diabetes had association with the uncontrolled diabetes.
Family Immigration and Quality of Treatment: Genetic and Environmental Effects on Complications of Diabetes

Margarita Fraimovitch
Family medicine, Israel

**Background:** There is a variety of native and foreign-born diabetes patients from all over the world in Israel. Combination of genetic and acquired factors leads to high-rate spreading of diabetes mellitus consequently, there exist certain differences in a number of features of the disease typical for Israeli-born patients and for immigrants.

**Methods:** The research is retrospective which has been conducted within a population of diabetes patients aged over 40 years in a group of immigrant and a group of Israeli-born patients. (119 immigrants and 65 Israeli-born patients) Parameters checked were: background diseases, family history, a kind of treatment, risk factors and complications.

**Results:** In the group of immigrants the percentage of male patients with negative family history was much higher than the percentage of male patients with positive family history of diabetes mellitus. (16.8% vs. 6.5% respectively) Relating immigrants with positive family history, micro-vascular complications were 3 times more prevalent than macro-vascular complications. (30.3% vs. 9.2% respectively) In the group of Israeli-born patients there was a significant difference in the level of micro- and macro-vascular complications among the patients with positive and negative family history. (32% vs. 12.3% for macro-vascular and 27.7 vs. 10.8% for micro-vascular complications)

**Conclusions:**
1. The percentage of males suffering from diabetes mellitus with negative family history is much higher than that with positive family history. (16.8% vs. 6.5%)
2. The level of micro-vascular complications among immigrants with positive family history is 3.3 times higher than the level of macro-vascular complications among immigrants with positive family history of diabetes mellitus. (30.3% vs. 9.2%)
Prolactinoma with Visual Defect

ChongKong Su
Medical, ZhangZhou city, Fujian Province, China

Patient Miss DinMei a 32 year old marriage female, live at ZhangZhou city Fujian Province in China, On Spring of year 2011, she suffered from amenorrhea and could not view back car with car mirror, The city military hospital reported there was a space occupied mass about 0.4 cm at sellar turcica, and hyperprolactinemia; We could not find Cabergoline (Dostinex) in mainland China, then we brought them from Taiwan, she received therapy for 4 months, and repeated Ophthalmic visual field check at Xiamen Chang Gung Hospital, those visual defects over both outer lower temporal sides disappeared; On Dec. 22, 2012, reported serum Estradiol=20.85pg/mL, FSH=6.4 mIU/mL, LH=0.111 mIU/mL, Prolactin=1.13 ng/mL, the therapy interrupted for 3 months then continuing therapy for 4 years and 8 months, the Dostinex 0.5mg per week for 2 years, 0.5mg per 2 weeks for 2 years, and 0.25mg per 2 weeks for the rest. now she care a 12 years son, her family are good health.
The Effects of Exercise on HDL Levels in Patients with Obesity

Murtaza Buyukkinaci

Internal Medicine, Istanbul, Turkey

Background: Obesity is a chronic metabolic disease associated with cardiovascular and atherosclerotic changes. It is also a public health problem because of related complications. High level of HDL is strongly associated with decreased risk of cardiovascular disease, stroke and other vascular diseases. In this study, we aimed to evaluate the effect of exercise on HDL levels in patients with obesity.

Methods: A total of 40 patients with obesity were included. Weight and height were measured and body mass index (BMI) were calculated. A standard exercise program, which lasted 4 months, was applied. All patients regularly walked 20 minutes before breakfast and 30 minutes after two hours from dinner. Homocysteine levels at the baseline compared with the values after 4 months.

Results: There was significant difference in BMI (34.2±1.8 at baseline, 31.9±1.4 after 4 months of exercise, p<0.05). The mean HDL level was 43.0±11.3 at baseline while it was 47.9±10.5 at 4. month. There was a statistically significant increase in HDL level (p<0.05).

Conclusion: Obesity and low level of HDL are significant risk factors for cardiovascular disease. Regular exercise can decrease body weight and increase HDL levels in patients with obesity.

Keywords: Obesity, exercise, HDL
Erectile Dysfunction and Diabetes

Abdallah mashal
Family Medicine, Israel

Sexual health is the integration of the somatic, emotional, intellectual, and social aspects of sexual being, in ways that are positively enriching, and that enhance personality, communication and love (WHO, 1974).

Erectile dysfunction (ED) is defined as the persistent inability to achieve or maintain an erection sufficient for satisfactory sexual performance, ED is a medical condition of major health significance, with implications that extend beyond treating the occasionally presenting patient who possesses a problem of seemingly non-life-threatening magnitude. The value of properly assessing and managing ED relates not only to affected individuals and their partners but also to society as a whole, and its scope encompasses physical and mental wellness aspects related to addressing (or failing to address) the sexual dysfunction, concurrent disease management issues, and socioeconomic burden.

Current data have also confirmed that the prevalence of ED mounts with increasing age and the presence of comorbid medical conditions, which include type 2 diabetes mellitus (46% of patients), obesity, cardiovascular disease, hypertension, dyslipidemia, depression, and prostate disease/benign prostatic hypertrophy (BPH) (Braun et al, 2000; Martin-Morales et al, 2001; Nicolosi et al, 2004; Rosen et al, 2004b; Saigal et al, 2006; Laumann et al, 2007;

As you know we have an epidemic disease called Diabetes Mellitus (DM), 2/3 of these patient suffer from ED, that will affect there compliance to diabetic therapy, and most of our physician are not familiar to discuss sexual issues with their patients, but this condition can be successfully treated in the majority of diabetes patients.
Detection of Early Ocular Preclinical Changes in Diabetic Patients

Ramazan Oner
Internal Medicine, Adiyaman, Turkey

**Objective:** The aim of the study is to evaluate ocular pulse amplitude (OPA), intraocular pressure (IOP) and average choroidal thickness (CT) of the eye using dynamic contour tonometry (DCT) and optical coherence tomography (OCT) in diabetic patients and to investigate the relationship of these parameters with each other and with glycated haemoglobin (A1C) and blood lipid levels.

**Methods:** In total, 89 diabetic patients were included in the study. IOP and OPA measurements of the patients were conducted using DCT, whereas CT measurements were performed using SD-OCT and enhanced-depth imaging OCT (EDI-OCT).

**Results:** There was an increase in IOP and OPA as well as a decrease mean CT in diabetic patients compared with the control group. There was a significant negative correlation between mean CT and Triglyceride level, a nonsignificant negative correlation between CT and glucose, A1C and total cholesterol levels; a significant positive correlation between CT and high-density lipoprotein level and a nonsignificant positive correlation between CT and low-density lipoprotein level.

**Conclusion:** It was observed that there was a decrease in CT in diabetic patients. The Triglyceride and A1C levels were determined to have a negative effect on CT, whereas high-density lipoprotein had a positive effect.

**Keywords:** Diabetes Mellitus, Dynamic Contour Tonometry, Optic Coherence Tomography, Choroidal Thickness, Triglyceride, Glycated haemoglobin
Elderly patients with hip fracture are at high risk for complications and in-hospital mortality. Shorter hospital stay and early discharge with still active clinical problems may lead to readmissions. We aim to describe this phenomena.

Retrospective cohort of all patients admitted to the Hip Fracture in Elderly Patients Registry (RIAFC) between July 2014 and July 2017, which included a basal interview and follow up at 3 and 12 months. We describe readmission rates and their CI95%. A proportional risk cox model was used to describe risk factors and time-to-readmission.

858 patients were included with a median hospital stay of 6 days(IQR 4). 85.9%(737) were female and the median age was 85.5(IQR 8).

Readmission rates were: 1.8%(CI95%0.6- 2.2) at 72 hours, 19.5%(CI95%16.9-22.4) at 3 months and 38.5%(CI95% 34.8-42.6) at 12 months. The main cause was infection 32%(82).

Associated factors were: age (85) HR 1.3(CI95%1-1.7;p0.04), female gender HR 0.5(CI95%0.4-0.7;p0.01), taking 5 drugs HR 1.05(CI95%1-1.1;p0.02), frailty HR 1.4(CI95%1.1-1.8;p0.01), Charlson score =2 HR 1.15(CI95%1.1-1.2; p0.01), hospital stay 7 days HR 1.4(CI95%1.1-1.8,p 0.01).

Readmission has a high incidence rate and high mortality which makes it a relevant problem that should be regarded accordingly.
Association Between Thalassemia Trait and Insulin Resistance

Aysun ISKLAR¹

Internal medicine, Istanbul, Istanbul, Turkey

Introduction: One of the subjects discussed in the patients with thalassemia major and thalassemia intermedia is whether excess iron deposition in the liver causes insulin resistance or not. As well, patient group with thalassemia trait (minor) is considered as iron deficiency anemia erroneously in daily practice and this group is subjected to excess iron treatment unnecessarily. In this study, if unnecessary iron load in the patients with thalassemia minor had any effect on insulin resistance was assessed.

Materials and Methods: A two-hour oral glucose tolerance test (OGTT) was performed in 30 thalassemia carrier patients and 30 gender-age-history matched healthy individuals. Glucose and insulin levels were measured at time zero, 30, 60, 90 and 120 minutes. Homeostasis model assessment of insulin resistance (HOMA-IR), whole-body insulin sensitivity index (WBISI), were calculated and the association between acute phase reactant C-reactive protein (CRP) and insulin resistance was investigated.

Results: There was no significant difference between study group and control group with respect to age, gender and body mass index (BMI) parameters. Insulin resistance (IR) parameters were compared within two groups and no statistical significance was determined. Groups were classified in two subgroups according to BMI value: Subgroups with BMI 25 kg/m² and subgroups with BMI

Conclusion: It was concluded that glucose metabolisms in patients with thalassemia trait did not show difference compared to BMI-matched healthy individuals. Detecting insulin resistance to be increased in both groups as BMI increased was suggestive of main factor causing disturbances in glucose metabolism in the patients thalassemia trait was obesity.
Confusing Thyroid Function Tests

Kerem SEZER
Internal Medicine of Endocrinology Department, MERSİN, Turkey

Abstract: Thyroid function disorders are common. Primary hyperthyroidism is characterized by increased fT3-fT4 and suppressed TSH but increased fT3-fT4 in the presence of unsuppressed TSH is rare. Thyrotoxicosis with unsuppressed TSH may be caused by TSH secretory pituitary adenoma (TSHoma) or thyroid hormone resistance (THR).

We will present two cases with THR and TSHoma.

CASE 1: A 22-year-old female patient was admitted due to thyroid dysfunction 3 months ago. He had palpitations and weight loss. Hyperthyroidism was detected. Suppression was observed in the T3 suppression test (Table 1). We excluded TSHoma because pituitary MR was normal, TSH alpha subunit was low. We diagnosed as thyroid hormone resistance and treated with propranolol 2x20 mg.

CASE 2: A 22-year-old male patient had admitted to another clinic with a complaint of right eye discomfort and headache 8 months ago. Pituitary MR showed an adenoma compressing optic chiasm. In preoperative evaluation; TSH: 14.5 uIU/mL, fT3:14 pg/mL, fT4: 3.5 ng/dL, other pituitary hormones was normal. Transcranial adenomectomy was performed. Because of post-operative residual adenoma and elevated fT4 and TSH, the patient were directed to our clinic. The patient had no symptoms of thyrotoxicosis except weight loss. On physical examination, no abnormal findings were found except grade 1 goitre. The elevation of TSH alfa-subunit was suggested TSHoma diagnosis. Suppression in the T3 suppression test was not observed (Table 1). Because of postoperative residual mass, octreotide was administered at a dose of 20 mg/month.

Result: THR and TSHoma are rare clinical conditions, and this two clinical conditions should be considered when a unsuppressed TSH with increased fT3-fT4 was detected as in these two cases.
The Effectiveness Of Robusta Coffee Beans Extract on the Decreased Rate of Blood Glucose Levels in Sprague Dawley White Rats

Jane Estherina Fransiska

Internal Medicine, Kupang, East Nusa Tenggara, Indonesia

Background: Diabetes Mellitus in Indonesia is showing the prevalence rate of 2,1% perspective and East Nusa Tenggara province is placed in fourth at 3,3% of it. Robusta coffee (Coffea canephora) contains chlorogenic acid which affects the inhibit of glycogenolysis, enhancing insulin action and glucose uptake.

Objective: To examine anti diabetic effect of robusta coffee bean (Coffea canephora) extract towards the decreased rate of white rats (Rattus norvegicus) Sprague Dawley strain blood glucose level.

Methods: An experimental study with true experimental design - randomized pre and post-test controlled group. The samples of the study were 24 rats selected randomly into several groups, and divided into normal control group (not treated), negative control (given Na-CMC 0,5%), positive control (given glibenclamide 0,45 mg/200 gBB), and three groups with different doses of extract divided into dose 1 (40 mg/200 gBB), dose 2 (60 mg/200 gBB), and dose 3 (80 mg/200 gBB).

Results: Robusta coffee bean (Coffea canephora) extract effect as anti diabetic in all dosages have the p 0,05.

Conclusion: Robusta coffee bean (Coffea canephora) extract has anti diabetic effect.

Key Words: Coffea canephora, Hyperglycemic, Diabetes Mellitus, Chlorogenic acid, Sprague Dawley
The Cognitive Function in Type 2 Diabetic Mellitus Patients
in Johannes Hospital Kupang, East Nusa Tenggara, Indonesia

stefany adi wahyuningrum
department of internal medicine, johannes hospital, kupang, east nusa cendana, Indonesia

**Background**: Diabetic Mellitus (DM) is a metabolic disease with characteristic of hyperglicemia due to insulin secretion or insulin work or both. DM also can cause cognitive disfunction. Uncontrolled type 2 DM cause severe hyperglicemia that can effects direct toxic to oxidative stress. Base on data from Basic Health Researched Indonesia, there are increased the number of people with DM from 1,1 % in 2007 increase to 2,1 % in 2013 with number of DM reached 12,2 million people.

**Objective**: This study aimed to describe the cognitive function in type 2 DM patients.

**Methods**: A descriptive observational. All 83 patients of type 2 DM. measured their cognitive function with MoCA (Montreal cognitive Assessment).

**Results**: The result show that 55 patients (66,3%) with cognitive dysfunction and 28 patients with normal cognitive function.

**Conclusion**: The type 2 DM patients can cause the cognitive dysfunction because of Hyperglicemia due to oxidative stress and atherosclerosis. The study results show that 66,3 % patients type 2 DM in Johannes hospital have cognitive dysfunction.
Evaluation of Serum Magnesium Level Among Newly Detected Patients with Glucose Intolerance

Muhammad Rahim
Nephrology, Dhaka, Bangladesh

Background: Hypomagnesaemia is associated with insulin resistance, diabetes mellitus (DM) and diabetic complications. Diabetic patients, on the other hand, often have low magnesium levels. This study was designed to evaluate serum magnesium level of patients with new diagnosis of any level of glucose intolerance e.g. impaired fasting glucose, impaired glucose tolerance (IGT) or DM and to compare these with serum magnesium level of age and sex matched healthy controls.

Methods: This case-control study was done in out-patient department of BIRDEM General Hospital from July to September 2017. Newly detected patients with glucose intolerance (DM 49, IGT 1) were cases and equal number (50) of age and sex matched healthy volunteers were controls. Serum magnesium level was measured in all study participants and a comparison was made between cases and controls.

Results: There was no significant difference between cases and controls regarding age (p=0.875), sex and body mass index (p=0.386). Serum magnesium level was normal in 29 cases and 37 controls and low in 21 cases and 13 controls. Mean serum magnesium was low in cases (0.70±0.14 m.mol/L) than controls (0.85±0.15 m.mol/L) but the difference was not significant (p=0.362). Serum magnesium level was negatively correlated with fasting blood glucose (r -0.526), 2-h post-glucose value (r -0.559) and glycated haemoglobin (r -0.551) among cases.

Conclusion: Serum magnesium level was lower among patients with DM and IGT when compared with serum magnesium level of age and sex matched healthy volunteers and serum magnesium level was negatively correlated with glycaemic status among them.
Is There a Relationship between Vitamin D3 and Hypertension and the Number of Antihypertensive Drugs Used

Fatih Cilingir
Internal Medicine, Turkey

In our study we wanted to search is there a relationship between vitamin D3 and hypertension and the number of antihypertensive drugs used. A total of 2279 patients were enrolled in the study. 71.8 % of the patients were female and 28.2 % were male. 839 (36.8%) of patients were not using blood pressure medication. 292 of (12.8 %) of patients were using 1 antihypertensive drug, 643 of (28.2 %) of patients were using 2, 408 of (17.9 %) of patients were using 3, 77 of (3.4 %) of patients were using 4, and 20 of patients (0.9%) were using 5 antihypertensive drugs. The age of patients was in the range of 30-90. The ages of women ranged from 30 to 89 and the ages of males ranged from 38 to 90 years. Vitamin D3 levels of patients were in the range of 4.52-40.5 ng/mL. Vitamin D3 levels of patients were between 4.52-36.5 ng/mL in non-hypertensive patients and 5.63-40.5ng/mL in patients with hypertension. There was no significant relationship between vitamin D3 level and blood pressure presence (p: 0,083). Also there was no significant relationship between vitamin D3 level and the number of antihypertensive drugs used (p: 0,349). Further work in this subject is necessary
Validation of Five Plasma Calibrated Glucometers to Screen for and Diagnose Gestational Diabetes Mellitus in a Low Resource Community Clinic

Lynnsay M Dickson¹
Department of Paediatrics, Johannesburg, Gauteng, South Africa

**Background:** Gestational diabetes mellitus (GDM) prevalence is of global concern. Universal screening may be enabled in low resource settings if point of care glucometers (POCs) are accurate at lower diagnostic thresholds of GDM. We investigated the accuracy of ISO 15197:2013 compliant POCs to screen for and diagnose GDM.

**Methods:** Consecutive women (n=666) were recruited to a 75g oral glucose tolerance test (OGTT) at 24-28 weeks gestation at a South African community clinic. Capillary blood glucose was measured by one of five POC brands and paired with venous blood samples submitted to independent laboratories. Laboratories used either a hexokinase or glucose oxidase method, together forming a composite reference test. World Health Organisation 2013 GDM diagnostic criteria were applied.

**Findings:** The prevalence of GDM by all test methods and the reference test was 16·1% and 9% respectively. Laboratories had a systematic bias of 0.2mmol/L and a 34% agreement in positive GDM diagnoses. Compared to the composite reference test, the Contour Plus and Freestyle Optium Neo had a diagnostic agreement of 97% and 95%, positive likelihood ratios of 29·78 and 19·85, specificity of 97% and 96% and a similar sensitivity of 89% respectively. The Accu-Chek Active, One Touch Select Flex Plus, and Glucocheck Classic performed less well.

**Interpretation:** The Contour Plus and Freestyle Optium Neo are valid real-time alternatives to laboratory analysed plasma glucose and could be used to screen for and diagnose GDM in low-resource settings.
Prevalence of Multiple Cardiovascular Risk Factors in Patients With Diabetes in South Africa

Hilton Kaplan

Endocrinology, Claremont, Western Cape, South Africa

Objective: To assess the presence of cardiovascular risk factors in patients with diabetes included in the International Diabetes Management Practices Survey (IDMPS) and evaluate level of control of metabolic disorders in this cohort.

Method: Observational, cross-sectional survey, conducted in 38 centers in South Africa; included 49 adults with type 1 diabetes (T1D) and 396 adults with type 2 (T2D).

Results: T1D patients had mean BMI=25.1kg/m² and waist circumference of 87.8cm. Hypertension was diagnosed in 32.7%, hypercholesterolaemia in 42.9% and 24.5% smoked. Only 2.2% of patients reached triple target* and 10.2% had macrovascular complications.

T2D patients had mean BMI was of 31.9kg/m² and waist circumference of 105.9cm. Hypertension was diagnosed in 74.7%, hypercholesterolaemia in 69.3% and 14.6% smoked. Only 3.6% of patients reached triple target* and 11.7% had macrovascular complications.

Discussion: Over half of T2D fulfil diagnostic criteria for metabolic syndrome based on dysglycaemia, BMI (or waist circumference) and presence of hypertension. With only 2.2% of patients achieving triple targets, this could potentially account for high prevalence of macrovascular disease despite relatively young age of the cohort (mean 58.4 years). Patients with T1D were younger (mean 42.6 years), slimmer and had less cardiovascular comorbidities; however the high rate of macrovascular complications in this group (11.7%) suggests poor long term glycaemic control.

Conclusion: A more intensive approach to lifestyle and diet modification as well as pharmacological management of cardiovascular risk factors is needed in patients with T1D and T2D in South Africa.

*Triple target: HbA1c7, BP130/80; LDL2.6mmol/L

Study was supported by Sanofi
Use of Diagnostic Criteria to Predict the Course of Gestational Diabetes and its Complications – a Pilot Study

David Karasek
3rd Department of Internal Medicine - Nephrology, Rheumatology and Endocrinology, Olomouc, Czech Republic

Aim: To compare using of diagnostic criteria for gestational diabetes mellitus (GDM) to predict its complications.

Methods: We investigated 418 women with GDM and stratified them according to their fasting (FPG) and postprandial plasma glucose (PPG) levels into the groups of women with FPG ≥ 5.1 mmol/l in first trimester (n = 109), women with FPG ≥ 5.1 mmol/l before standard oral glucose tolerance test (oGTT) in second trimester (n=209) and women only with impaired PPG during the standard oGTT (1h oGTT PPG ≥ 10.0 mmol/l and/or 2h oGTT PPG ≥ 8.5 mmol/l, n = 100) in second trimester.

Results: Women diagnosed by impaired FPG (first and second trimester) entered pregnancy with higher body weight (78.3±19.1 and 74.2±16.7 vs. 67.2±15.7 kg; p<0.001) as well as BMI (27.9±6.6 and 26.4±5.8 vs. 24.4±5.2 kg/m2; p<0.001) when compared to women only with impaired PPG. Women with GDM based on impaired FPG the first trimester were more likely to require insulin treatment (14.7% vs. 7.1% and 4.0%; p<0.05). The most significant weight gain during the pregnancy was observed in women who were diagnosed by impaired FPG in the second trimester (12.4±6.9 vs. 9.3±6.8 and 11.1±4.7 kg; p<0.05). These women more frequently underwent a caesarean section (39.7% vs. 25.1% and 31.0% p<0.05) and their children had a higher birth weight (3415.6±529.0 vs. 3372.2±552.2 and 3199.0±560.5 g; p<0.05).

Conclusion: Higher FPG represents a greater risk for several GDM complications during pregnancy than postprandial glucose intolerance.

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Scenario of Hypovitaminosis D and Duration of Sunexposure Required for its Normal Value for the Apparently Healthy Population in Bangladesh

Goutam Kumar Acherjya

Medicine, Upazila Health Complex, Bagherpara, Jessore, Jessore, Bangladesh

Objective: To investigate the level of vitamin D deficiency and the exact duration of sun exposure is required to maintain the normal level of vitamin D among the clinically apparent healthy population in Bangladesh.

Methods: An observational study conducted in Jessore, Bangladesh.

Results: Out of 160 (M=69 & F=91) participants 63.7% (102), 31.3% (50) and 5% (8) had deficient (≤20ngm/dl), insufficient (20-30ngm/dl) and sufficient (30ngm/dl) vitamin D respectively. Our total mean vitamin D was 18.60±6.59 ngm/dl and no significant age difference was observed (p:0.492) where 19.72±7.10 ngm/dl in case of male and 17.74±6.07 ngm/dl in case of female, so no significant sex difference was observed (p:0.059). Sun exposure play a vital role in the vitamin D deficiency and we observed only 1-2 hours/day sun exposure was sufficient for normal vitamin D level (p: 0.001). Female who used veil had significantly lower level of vitamin D (p : 0.001) due to lack of adequate sun exposure. This was also true for the urban subjects who also had significant low level of vitamin D due to same reason (p:0.009). There was no deficiency observed in the farmer group. No significant difference observed in deficiency of vitamin D among the different educational level, skin complexion or BMI. But the obese participants had significant (p: 0.041) lower vitamin D level.

Conclusion: Though Bangladesh is a tropical country, 95% apparently healthy participants having vitamin D deficiency and insufficiency in our study and at least 1-2 hours/day sun exposure is required to maintain the normal value of vitamin D.
Periodic paralysis is a heterogeneous group of inherited muscle disorders. It is characterized by recurrent attacks of intermittent skeletal muscle weakness. It is more commonly seen as episodic attacks. The common point of most of them is changes in anion channels and particularly in potassium channels. Our case presented with a complaint of dizziness and fall. The patient was diagnosed with hypokalemic periodic paralysis (HPP) whose prevalence rate was thought to be approximately 1:100,000 in further consideration.

Here, a 42-year-old male patient with symmetrical involvement defining previous paralysis attacks is presented. He noticed extreme lower limb weakness after dizziness and fall. At physical examination, was unremarkable. The patient stated that he experienced a similar attack previously in overcast weather but he recovered and his family history was unremarkable. He did not define disease due to use of multidrug use and an acute or chronic disorder. A computed tomography of the brain taken in the emergency department was considered to be normal. Serum potassium (K+) level was measured to be 2.3 mmol/L at test performed during the presentation of the patient to the emergency department and it was below the normal range (3.5-5.1 mmol/L). The patient was considered to have severe hypokalemia. Potassium replacement was initiated in the patient with features of hypokalemia at an electrocardiogram (ECG) record. Potassium infusion (KCl [2 meq/mL]) was administered at 5 ml/h through a peripheral vein. Muscle weakness of the patient regressed 6 hours after initiation of treatment.
Erectile Dysfunction as a Prediabetes Symptoms

Aysun ISKLAR¹

Internal medicine, Istanbul, Istanbul, Turkey

Introduction: The aim of this study is to evaluate the fasting blood glucose (FBG) levels of the patients presenting to urology outpatient clinic with a complaint of erectile dysfunction (ED) as a parameter of metabolic syndrome.

Materials and Methods: The male patients presenting to urology outpatient clinic with a complaint of ED between October 2017 and December 2017 were included in the study. This was a retrospective cross-sectional study of the prevalence of erectile dysfunction. Fasting serum glucose and glycolized hemoglobin (HbA1c) levels of 107 male patients with ED were obtained from the hospital database and screened for study protocol. NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) program was used for the statistical analysis.

Results: Since they did not have fasting blood glucose levels, 15 of 107 patients with a diagnosis of ED were excluded from the study. Ninety-two patients with fasting blood glucose levels and without a diagnosis of DM previously were taken into consideration. All of the patients were males. Mean age of the patients was 45.9±10.3 (Table 1). Mean fasting blood glucose level was measured to be 133±77.33 mg/dL. While FBG was 100 mg/dL in 52.1% cases (n=48), it was 120 mg/dL in 32.5% (n=30) of them and 14.1% of them were determined to have diabetes mellitus with a hemoglobin A1c level of 6.5% (Table 2).

Conclusion: The important finding of this study is the rate of impaired fasting blood glucose (IFG) in the patients with ED diagnosis.
Pituitary adenomas are being identified more frequently due to the advent of detailed imaging techniques. Pituitary adenomas larger than 1cm are classified as a macroadenoma. Non-functioning pituitary macroadenoma (NFA) is the commonest macroadenoma. The gold standard treatment is surgery especially for tumours causing mass effect and disruption of surrounding structures. However if the patient is unsuitable for surgery other modalities available are radiotherapy, chemotherapy and medical therapy. The outcome of the non-surgical modalities is variable and there are limited studies on the efficacy of these modalities. We report a patient with a NFA with visual disturbance who refused surgical intervention. The patient was treated with intramuscular octreotide 20mg monthly which resulted in mild improvement in visual field defects.
Type 2 Diabetes and Hashimotto Thyroiditis-Possible Associations and Clinical Correlations-Preliminary Results

Oana-Andreea Parliteanu

Aims: The primary objective is to see the relationship between Type 2 Diabetes and Hashimotto Thyroiditis, since the only correlation described was between Type 1 Diabetes and Hashimotto Thyroiditis based on an autoimmune mechanism.

Methods: We designed a retrospective observational research using 150 patients seen in 2016 and 2017; out of those patients 50 had Type 2 Diabetes, 50 had Hashimotto Thyroiditis and 50 had Type 2 Diabetes and Hashimotto Thyroiditis. The three groups were divided as follows, gender related: for the Type 2 group 26 (52%) were females and 24 (48%) were males, for the Thyroiditis group 48 (96%) were females and 2 (4%) were males, for the third group 48 (96%) were females and 2 (4%) were males.

Results: Out of the results it was considered to be statistically significant the following: the incidence of Dyslipidemia was higher in Thyroiditis group ($r= .59$, $p.001$) than in the group of Type 2 ($r=.36$, $p.001$); Ischemic cardiac disease was more frequent in Thyroiditis group ($r= -.49$, $p.001$) than in the Diabetes group ($r=.38$, $p.001$); in the group that had both Diabetes and Thyroiditis Hba1c was correlated with pre-existing Thyroid pathology ($r= -.28$, $p.001$), Dyslipidemia was correlated with Hepatic Steatosis ($r=.34$, $p.001$); Ischemic Cardiac Disease was correlated with the value of ATPO ($r= -.25$, $p.01$).

Conclusions: After assessing all the parameters we have reached the conclusion that there is a statistically significant correlation between the characteristics of Type 2 Diabetes and Autoimmune Thyroiditis, and between the associations of this diseases considering the metabolic component.
Effects of Carbohydrate Counting and Multiple Flexible Dose Insulin Injection in Type 1 Diabetic Patients

Aysegul Atmaca

Internal Medicine, Atakum, Samsun, Turkey

Background and aim: The aim of this study was to evaluate effects of carbohydrate counting and multiple flexible dose insulin injection on some metabolic parameters in type 1 diabetic patients.

Methods: Twenty type 1 diabetic patients were included in the study. The patients were on multiple dose insulin but with a standard diabetic diet. Carbohydrate counting was taught to patients, insulin dose was calculated and injected according to carbohydrate counting. Metabolic parameters, insulin doses and hypoglycemic events before and after carbohydrate counting and flexible dose insulin injection were compared using paired samples T test.

Results: Ten patients were women and 10 were men. Mean age was 23.6 years (18-35.) Mean follow-up was 14.3 months (6-24). Significant changes were observed in HbA1c levels (from 8.7 to 7.3%, p=0.001), postprandial blood glucose (from 212 to 176 mg/dL, p=0.024) and total bolus insulin dose (from 19 to 18 Units/day, p=0.002). There were no significant changes in fasting plasma glucose, total daily insulin dose, basal insulin dose, body mass index and hypoglycemic events (all p’s 0.05).

Conclusion: This study showed that a better metabolic control was achieved with carbohydrate counting and flexible insulin dosing in type 1 diabetic patients. However, most patients in our region are not well-educated and have difficulty in learning carbohydrate counting and they are reluctant to start carbohydrate counting. Significant decrease in HbA1c levels in our patients may encourage others to start carbohydrate counting.
Description: Quality of life (QoL) is impaired in patients with thyroid dysfunction but has never been evaluated in patients with euthyroid nodular goiter (ENG). The aim of this study was to evaluate QoL in patients with ENG and compare the results with a healthy control group.

Methods: Thirty patients with ENG (mean age 38.0 years, male/female = 3/27) and 30 healthy, age and gender-matched euthyroid subjects without thyroid nodule (mean age 38.9 years, male/female = 4/26) were included in the study. The groups were questioned and compared with regard to Beck Anxiety Scale (BAS) and Beck Depression Scale (BDS) scores. QoL is evaluated with Short Form-36 (SF-36) questionnaire.

Results: There were no significant differences with regard to age, gender, marital and education status, BAS and BDS scores between the two groups (p 0.05). Mental health and vitality scores of SF-36 were significantly lower in the patient group (p’s 0.013 and 0.036, respectively). Physical component, mental component, physical functioning, role physical, role emotional, social functioning, bodily pain and general health scores were similar between the groups (all p’s 0.05). Physical functioning, bodily pain, vitality and physical component scores of SF-36 were negatively correlated with both BAS and BDS. No correlations were found between SF-36 scores and age, disease duration, thyroid volume and TSH.

Conclusion: QoL (especially sub-scales of mental components of SF-36) is impaired in patients with ENG even though they have no thyroid dysfunction. This impairment is related to anxiety and depression rather than disease characteristics.
Associations of Glicemic Control, Cardiopulmonary Fitness and Quality of Life in Type 2 Diabetic Women

Raziye Nesrin Demirtas

Physical Medicine and Rehabilitation, Eskisehir, Turkey

**Aim:** To investigate the associations of glycemic control, cardiopulmonary fitness and quality of life in type 2 diabetic women

**Methods:** Fifty two women with type 2 diabetes mellitus (mean age 60.84±8.51 years) were included in this study. Diabetes mellitus was diagnosed according to the WHO criteria. The glycemic control was established with glycated hemoglobin A1c [HbA1c]. Women completed the self reported The Duke Activity Status Index (DASI) questionnaire which had been shown to be valid by high correlation with peak oxygen uptake in subjects underwent graded exercise testing for cardiopulmonary fitness and the Medical Outcomes Survey 36-Item Short Form Health Questionnaire (SF-36) for health related quality of life.

**Results:** The values of HbA1c and DASI-METs were 8.28±1.87 and 7.35±3.87, respectively. The HbA1c levels were inversely correlated to DASI-METs (r= -0.294 p<0.034) and physical functioning domain of SF-36 (r= -0.344 p<0.013). The DASI-METs were associations with physical functioning (r= 0.677 p<0.000), physical role functioning (r= 0.469 p<0.000), emotional role functioning (r= 0.311 p<0.025), social role functioning (r= 0.274 p<0.049) and vitality (r= 0.520 p<0.000) domains of SF-36.

**Conclusion:** These findings support that the glucose control and quality of life are increasing while cardiorespiratory fitness improves. One of the most important factors to increase the cardiorespiratory fitness is physical activity. Cardiorespiratory fitness, glucose control and quality of life can be improved by giving importance to interventions that will increase physical activity.
The aim of our study was to examine the time-course changes in serum lipid profiles of obese patients who underwent laparoscopic Roux-en-Y gastric bypass surgery (RYGB).

A total of 64 obese patients who underwent RYGB in our hospital from the March 2012 to the September 2017 and had a minimum 6-months follow-up were included in our study. Patients using any lipid-lowering agent were excluded. The data were achieved from electronic files.

Total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), triglyceride (TG) levels were analyzed preoperatively and postoperatively at 3rd, 6th, 12th, 24th and 60th months.

There were 40 women (62.5%) and 24 men (37.5%) with a mean age of 37.3± 9.2 years. Mean body mass index was 46.6 ± 7.1 kg/m2.

Improvement in lipid profiles was observed as early as 3 months postoperatively. TC, TG and LDL-C levels were reduced postoperatively from 3 months up to 5 years post-RYGB (p < 0.01), however HDL-C levels were significantly increased from 1 year onward (p < 0.01) (Table 1).

In conclusion, RYGB surgery substantially improves lipid profile in obese patients and improvement seems to persist in the long term.

Table 1: Time-course changes of plasma lipid levels
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Objective: determine the frequency of the metabolic syndrome (MetS) in women age 25-45 years with different levels of prolactin.

Materials and methods: In 2013-2017 a population survey was conducted of a random representative sample of the population of 25-45 years. A total of 1511 people were examined, 841 of them women. Prolactin is defined in 327 women. The definitions All-RSSC (2009) - the criteria of the MetS.

Results: MetS components according to the criteria of All-RSSC (2009), in the quartiles of prolactin: in Q1, there are more women with OT80 cm than in Q4: 50.6% and 34.6%, p = 0.040; in Q1 LDL 3 mmol/l in 58.0% and in 41.5% in Q3, p = 0.036. Women with HDL-C

Conclusion: Among women 25-45 years, whose prolactin values are closer to the lower limit of reference values (4.05 ± 1.11 ng / ml), the percentage of MetS is 28% (the definitions of All-RSSC(2009)) and in the group with a prolactin level above the upper limit of the norm, but not exceeding 2N (27.84 ± 9.79 ng / ml): 16%. However, among women with a very high level of prolactin (more than 2N), the MetS frequency is 33%.
Objective: 327 Russian women from representative population sample, age 25-45.

Materials and methods: waist circumference (WC), body mass index (BMI), blood pressure (BP), prolactin level (PRL), total cholesterol (TC), triglycerides (TG), LDL and HDL cholesterol, fasting plasma glucose (FPG) levels were collected for each person.

Results: quartile analysis of PRL in the total sample showed a decrease in FPG (5.71±0.84/5.47±0.59* mmol/l, p=0.019), WC (83.30±15.53/79.40±13.59* cm, p=0.067) from Q2 to Q4, decrease in LDL (3.27±0.73/2.91±0.86* mmol/l, p=0.006) and increase in HDL (1.38±0.25/1.46±0.31* mmol/l, p=0.060) from Q1 to Q3. Decrease in TC was noted from Q1 to Q4 (5.16±0.84/4.82±0.89* mmol/l, p=0.011). In subgroup of women with prolactin level higher than 19.5 ng/ml, an increase in TG (0.71±0.22/1.17±0.72* mmol/l, p=0.042), BMI (22.75±3.05/26.84±7.33* kg/m^2, p=0.026), WC (74.15±7.56/83.9±15.28* cm, p=0.024) from Q1 to Q4 PRL.

Conclusion: as in women with high PRL values (43.51±8.86 ng/ml) and in women with prolactin values closer to the lower limit of reference values (4.05±1.11 ng/ml), higher values of WC, BMI, and blood lipids were found.
Comparison between DLBS3233 and Metformin in Improving Endothelial Dysfunction in Type 2 Diabetes Mellitus

FATIMAH ELIANA
Internal Medicine, Jakarta Pusat, DKI Jakarta, Indonesia
Fatimah Eliana
Faculty of Medicine, Yarsi University

Aim: This study aims to compare the benefits of DLBS3233 and metformin in improving endothelial function in type 2 diabetes patients. Asymmetric dimethylarginine (ADMA) is a major endogenous nitric oxide synthase inhibitor, thus leading to abnormalities in endothelial function.

Methods: The method of study was case control compared diabetes patients who used Inlacin contained of DLBS3233 bioactive fraction of lagerstroemia speciosa (folium) and Cinnamomum burmannii (korteks) 50-100 mg/day as case group, with metformin 1500-2000 mg/day as control group, for 6 months. Subjects with HbA1c 6.5-7.5 % met the criteria. The distribution of age, gender, body mass index, HbA1c and cholesterol in both groups were about the same. In both groups we also examined ADMA in serum. All patients are given education, medical nutrition therapy and appropriate physical exercise.

Results: Research is done for 6 months, at 30 diabetes patients taking inlacin and 30 diabetes patients taking metformin. In this study proved that both diabetes patient who received inlacin or metformin decreased HbA1c (6.8±1.2 vs 6.8±1.4, p 0.05) and serum ADMA levels (0.38 ± 0.09 vs 0.43 ±0.12, p 0.05).

Conclusion: Inlacin and metformin can lower HbA1c level and ADMA, but decreasing ADMA level after giving inlacin better than after giving metformin. Inlacin and metformin can improve endothelial function in type 2 diabetes patients.

Key words: ADMA, DLBS3233, HbA1c, Inlacin, Metformin
Correlations of Thyroid Function, Body Composition and Pulmonary Function in Hyperthyroid Patients

Raziye Nesrin Demirtas¹

Physical Medicine and Rehabilitation, Eskisehir, Turkey

**Purpose:** This study aimed to evaluate the correlations of thyroid function, body composition and pulmonary function in hyperthyroid patients who diagnosed new.

**Materials and Method:** The demographic characteristics were recorded in 22 consecutive hyperthyroid patients aged between 23 and 66 years. The levels of thyroid hormones (T₃, T₄, free T₄, TSH) by blood tests, body composition with bioelectrical impedance analysis (BIA) and the pulmonary function including vital capacity (VC), forced vital capacity (FVC), first second of forced expiratory volume (FEV₁), FEV₁/FVC ratio using spirometer was assessed.

**Results:** The correlations of levels of thyroid hormones to body composition parameters were poor (p,005). There were associations between T₄ with VC % (r= -0.491 p=0.038) and respiratory frequency (r=0.621 p=0.002); FT₄ with FVC % (r= -0.527 p=0.036); TSH with FEV₁/FVC (r= -0.436 p=0.048). It was found the significant correlations between different parameters of pulmonary function and body composition (p,005 - 0.000).

**Conclusion:** This data in our hyperthyroid patients showed although thyroid function was not associated with body composition, the pulmonary function was associated with thyroid function and body composition. It was thought that the evaluation of this issue in a larger group of hyperthyroid patients would be useful.
Is Endocan an Indicator of Increased Cardiovascular Risk in Metabolic Syndrome?

Banu Boyuk

Department of Internal Medicine, istanbul, --- Select One ---, Turkey

Background:
Metabolic syndrome has been recognized as a predictor of cardiovascular diseases. Epicardial adiposis tissue (EAT) thickness recently shown as a predictor of cardiovascular diseases in metabolic syndrome patients. Endocan is a novel molecule which is considered as an early marker of endothelial dysfunction. Our aim was to evaluate Endocan serum levels for the first time in metabolic syndrome patients, in relation with epicardial fat thickness.

Methods
The study included 44 patients with metabolic syndrome who had neither chronic kidney disease nor chronic inflammatory disease and 26 healthy controls. Fasting blood samples were obtained from the patients and control group. The serum levels of Endocan were measured with Sunred Elisa kit. EAT thickness of patients was measured echocardiographically.

Results:
The serum endocan levels were significantly lower in the metabolic syndrome patients compared to the healthy controls (120.71±90.17 pg/ml vs 414.59±277.57, p<0.001). Metabolic syndrome patients demonstrated remarkably high EAT (p=0.042). Spearmen correlation analysis revealed that EAT have positive correlation with age (r=0.397, p=0.008) and weight (r=0.010) however have no significant correlation with serum endocan levels (r=-0.021, p=0.893) and other parameters of metabolic syndrome.

Conclusion
EAT thickness was high in metabolic syndrome patients and can be a useful marker for the cardiovascular risk assessment in this patients group. However serum endocan levels of metabolic syndrome patients were found low and lack of correlation with EAT Thickness. Our data suggests serum endocan levels cannot be used as a cardiovascular risk predictor in metabolic syndrome patients.
Prevalance of Insulin Resistance Before and After Surgical Treatment of Pheochromocytoma

Feyzullah GUCLU¹
Endocrinology and Metabolism Disease, Izmir, Turkey

Introduction: The incidence of pheochromocytoma is 2 to 8 per million persons per year and it is rare neuroendocrine tumors. Pheochromocytoma is catecholamine-producing tumors that often impair glucose tolerance. Catecholamines are important counter-regulatory hormones to insulin. Pheochromocytoma is one of the causes of insulin resistance (IR). Impaired glucose tolerance is present in pheochromocytoma at the rate of 25-75%.

Methods: We analyzed 48 patients who were diagnosed with pheochromocytoma and not diagnosed with diabetes before between January 2014 and April 2017 at the Tepecik Research and Training Hospital Endocrinology Clinic. We evaluated IR before and 6 week after surgical treatment. We used Homeostasis Model Assessment (HOMA-IR) to estimate IR. It was calculated according to the formula, HOMA-IR = fasting insulin (μU/L) x glucose (mmol/L) / 22.5

Results: The 48 pheochromocytoma patients were enrolled to the study. Thirty four of them were women and 14 of them were men. The mean age of the patients was 55.26±12.10 years. The mean HOMA-IR value was 3.20±1.20 before surgery (B.S) and 2.50±0.93 after surgery (A.S). Thirty one of patients were noted to have IR (64.58%) B.S and 8 patients (16.67%) A.S (p0.05).

Conclusion: In patients with pheochromocytoma the prevalence of IR was 64.58% B.S. This finding is similar to the literature. Epinephrine is a potent catecholamine in producing hyperglycemia because of its higher affinity to the β2 adrenergic receptors, probably by inducing glucagon secretion. It increases transient glycogenolysis in the liver. And inhibits insulin secretion mostly by stimulating α2 adrenergic receptor. IR was 16.67% A.S. Postoperative catecholamines levels decreased and improvement IR.
Physical Exercise and Appropriate Protein Intake Evidence A Less Fragility and Better Neural Quality in the Patient

Veronica Chazin  
Nutricion, Madrid, Madrid, Spain

Goals:
Demonstrate, after a review in the existing scientific literature, evidence of an improvement in sarcopenia, Neuronal regeneration and reduced fragility in healthy and sick patients after an adequate combination of nutritional supplements and physical training

Methods
Descriptive study where a review of more than 45 scientific articles is carried out in relation to an improvement in sarcopenia and neurodegenerative diseases by incorporating physical activity and a diet with a contribution Protein and adequate amino acid profile During eight months, a total of 213 patients aged between 70 and 98 +/- 2,256 were selected. years during his admission to the Virgen de la Torre Hospital, of which 98 of them had some pathology neurodegenerative and a questionnaire about the quality of their diet and previous or current physical activity

Results
In the studies evidence is shown between physical exercise and adequate protein intake with a increase in fat-free mass, skeletal muscle mass and strength and also improves other aspects that contributes to the well-being decline in C-reactive protein or increase in growth factor similar to insulin

Conclusions
Different mechanisms such as an increase in volume in different brain regions are associated with the practice of physical activity with an improvement in neurocognitive health The evidence points to an adequate intake of proteins, essential amino acids and vitamin D combined with an adequate exercise program would already mean improvement in body composition and function An adequate strategy in patients with low intakes or low appetite, would be the supplementation with Resource Senior Active, which meets all the above characteristics/pre
Maternal and Perinatal Outcome in Prolactinomas with Pregnancy

Minakshi Rohilla
Obstetrics & Gynaecology, India

**Background:** Prolactinomas are the most common prolactin producing benign tumor of pituitary gland, with an estimated prevalence of 500 cases/1 million population. Rectification of hyperprolactinemia with potent dopamine agonist (Bromocriptine or cabergolin) frequently restores normal menses and hence often results in conception. We hereby report experience of prolactinoma during pregnancy at a tertiary care institute in the last 17 years (1995-2011).

**Method:** Twenty seven pregnant women with fifty six pregnancies with prolactinoma were followed prospectively for their pregnancy outcome while they were treated with a preset medical and surgical protocol. Outcome of the disease in the pregnancy along with maternal and perinatal outcome were studied.

**Results:** 15 women were diagnosed as macroadenoma while 12 women had microadenoma in pregnancy. One woman with untreated microadenoma had four intra uterine fetal deaths prior to diagnosis and treatment of microadenoma. 5 pregnancies out of 30 pregnancies of pituitary macroadenoma (16%) had evidence of symptomatic tumor enlargement. 4 patient was managed medically and symptomatic improvement occurred on switching to or increasing the dose of more effective dopamine agonist, cabergoline. One patient had to undergo transphenoidal surgery during pregnancy, reported with an acute condition pituitary apoplexy with headache and visual symptoms at 16 weeks of pregnancy.

**Conclusion:** Women with treated pituitary microadenoma generally have good maternal and perinatal outcome. Women with pituitary macroadenoma should be discouraged for pregnancy until there is an evidence of tumour shrinkage. Reintroduction of dopamine agonist drug in pregnancy may lead to tumour size reduction; however surgery is an option who does not respond to dopamine agonist drugs.
Background and aims: The Freestyle Libre flash glucose monitoring system (FGM) was introduced in Belgium in July 2016. It has a 2-weeks lifespan, measures interstitial glucose and does not require calibration by the user. There is limited data regarding the effectiveness of this device.

Methods: In this monocentric study, we included 127 patients with type 1 diabetes, who have been using the FGM for at least one year.

Results: Mean HbA1c fell from 7.82 +/- 1.25% at baseline to 7.59 +/- 1.07% at 6 months (p = 0.011) and 7.59 +/- 1.08% at 12 months (p = 0.018). Episodes of hypoglycaemia (glucose < 70 mg/dl) as determined from FGM data did not differ significantly: 0.96 +/- 0.61 per day at 1 month, 0.94 +/- 0.71 per day at 6 months (p = 0.750) and 0.92 +/- 0.68 per day at 12 months (p = 0.606). HbA1c calculated by the FGM did not differ significantly from laboratory HbA1c (last 1 month calculated HbA1c, p = 0.407; last 3 months calculated HbA1c, p = 0.600). Using the 10-item visual analog scale, the patients rated their experience: they were highly satisfied, mean values ranging from 7.9 to 9.5; 48.6% reported a cutaneous reaction to the sensor (score of 5 or more out of 10).

Conclusions: At our center, the use of FGM by patients with type 1 diabetes improved glycaemic control without change in number of hypoglycaemia. Most of the patients were highly satisfied with this device.
Introduction

Although prolactinomas are one of the commonest pituitary tumors, second only to non-secreting adenomas, Resistant Macroprolactinomas are rare. Prolactinomas usually present early in females, as amenorrhoea develops quickly, and are therefore most often Microprolactinomas. In men the symptoms of fatigue and poor libido are often ignored, leading to a delay in presentation and enabling them to grow bigger and present as Macroprolactinomas. Resistant prolactinomas are rare.

They can be of any size but are often big. By definition they are resistant to large doses of Cabergoline, in the region of 1mg/day.
Hyperthyroidism as a Key for the Diagnosis of a Choriocarcinoma

Maria Julia Muzio

Internal medicine, Ciudad Autonoma de Buenos Aires, Argentina

Hyperthyroidism is a relatively frequent condition of multiple causes. The most common cause is Graves’ disease; followed by hyperthyroid multinodular goiter and toxic adenoma. The association between hyperthyroidism and cancer is infrequent in daily practice. It is associated with functioning primary tumors of the thyroid gland, especially follicular carcinoma, but may also be associated with other tumors such as the struma ovarii.

We present the case of a 42-year-old man with clinical symptoms of 2 months’ evolution consistent with hyperthyroidism, presenting significant weight loss of 22 pounds, profuse sweating and palpitations. Physical examination revealed diffuse goiter with thyroid bruit on auscultation, no evidence of ophthalmopathy, diffuse abdominal pain with hepatomegaly, showing multiple hepatic solid lesions consistent with metastases in the abdominal computed tomography.

Given that germ cell tumors are associated with high levels of human chorionic gonadotropin, and that it has molecular similarity with TSH, this hormone was requested, which presented a value of 872827 mUI/ml. A biopsy of a liver metastases was made which confirmed the diagnosis of choriocarcinoma. The patient began treatment with chemotherapy with initial response and clear improvement in relation to his hyperthyroidism.

Although infrequent, it is important to consider within the differential diagnoses of a patient with hyperthyroidism, tumors as causative agents. On the other hand, the development of hyperthyroidism in a patient with suspected neoplastic disease may be a clue to a faster diagnostic arrival, significantly limiting the diagnostic possibilities.
Screening of painful peripheral neuropathy in diabetic hospitalized patients

Gabriel Figueroa-Parra

Department of Internal Medicine, Monterrey, Nuevo Leon, Mexico

Introduction
Painful diabetic neuropathy (PDN) is characterized by diffuse damage to the peripheral nerve fibers. PDN manifests as tingling sensation, numbness, burning, excruciating stabbing type of pain, sometimes intractable and may be associated with paresthesia and hyperesthesia coupled with deep aching in feet or hands. Affects about 30% of diabetic patients in ambulatory setting. We aimed to evaluate the prevalence of PDN of diabetic population in the internal medicine ward of the university hospital “Dr. José Eleuterio González” in Monterrey, Mexico.

Objective
To assess, in the diabetic hospitalized population the prevalence of painful diabetic neuropathy.

Materials and Methods
We conducted an observational prospective study involving adult diabetic patients admitted from January to October 2017. We use the DN4 (Douleur Neuropathique en 4 Questions) screening tool. PDN was defined as a score of 4 or more. We also obtained age, sex, type of diabetes mellitus, body mass index (BMI) and duration of diabetes.

Results
111 patients with diabetes were assessed. 6 were excluded for altered mental status. From the 105 patients included, 32 (30.5%) patients had a positive DN4 test. Mean age was 56 (SD ±16.03) years, 96 (91.4%) patients had type 2 diabetes, 9 (8.6%) patients had type 1 diabetes, mean duration of diabetes was 11 (SD ±7.91) years, mean BMI was 27.1 (SD ±6.02) kg/m².

Conclusions
30.5% diabetic hospitalized patients had a positive screening test for PDN in a general internal medicine ward from Mexico. This is similar to prevalence reported in an ambulatory setting.
Adrenal incidentaloma and the Janus Kinase 2 V617F mutation: co-incidence or coexistence?

**Mustafa Unubol**

Mustafa Ünübol¹, Bilal Acar², İrfan Yavaşoğlu³, Gökay Bozkurt⁴, Zahit Bolaman³, Engin Güney¹

1. Adnan Menderes University, Medical Faculty, Department of Internal Medicine, Division of Endocrinology, Aydin Turkey
2. Cankiri State hospital, Department of Internal Medicine, Cankiri, Turkey
3. Adnan Menderes University, Medical Faculty, Department of Internal Medicine, Division of Haematology, Aydin, Turkey
4. Adnan Menderes University, Medical Faculty, Department of Genetic Aydin, Turkey

Key words: Adrenal incidentaloma, JAK 2 V617F mutation, myeloproliferative disease

Objective: Proofs of irregular JAK signalization are present in various cancer types. Inappropriate JAK signalization leads to the survival of various solid tumors and cell proliferation. Mutation positivity in JAK2 is observed in the spectrum of myeloproliferative disease. The relationship between adrenal incidentaloma (AI) and JAK2 V617F mutation is unknown. We detected JAK2 V617F mutation in 4 patients with adrenal incidentaloma. Our cases are indicating the coexistence of JAK2 V617F mutation and AI.

**Case 1.** An 81-year-old male patient had been undergoing treatment for 12 years after being diagnosed with essential thrombocytosis (ET). He had been checked for the JAK2 V617F mutation and was found to be homozygous positive. During patient follow-up, he underwent an upper abdomen MRI. An ovoid mass was detected. It was approximately 23×33mm at the left adrenal and was compatible with a well-circumscribed adenoma.

**Case 2.** The JAK2 V617F mutation was heterozygous positive for a 37-year-old female patient who was evaluated for thrombocytosis etiology. The contrast-enhanced upper abdominal tomography performed a nodular lesion that was 11×8 mm. It was interpreted as a radiologically benign adenoma.

**Case 3.** An 61-year-old female patient had been undergoing treatment for 2 years after being diagnosed with ET. He had been checked for the JAK2 V617F mutation and was found to be heterozygous positive. He underwent an upper unenhanced abdomen CT. It was approximately 33 × 37mm at the right adrenal and was compatible with a well-circumscribed adenoma.

**Case 4.** The JAK2 V617F mutation was heterozygous positive for a 57-year-old female patient with AI. The patient’s levels of hemoglobin, leukocyte and platelet counts were normal.

**Discussion:** As a result, our cases demonstrate coexistence of the JAK2 V617F mutation with AI. Because of this, we think that the JAK2 mutation must be further evaluated to clarify the etiology of AI’s.
Iron Deficiency as Cause of Infertility

Annika Tulenheimo-Silfvast
Reproductive endocrinology, Helsinki, Finland

Although 20-25% of women in fertile age suffer from iron deficiency, known to be associated with poor outcome of pregnancy, there is limited data on fertility in women with low iron deposits. Ferritin is a marker of iron reserve, and the presence of the transferrin receptor has been documented in oocytes and granulosa cells. Further, the Nurses Health Study II showed an inverse relation between iron supplementation and conception. We wanted to evaluate the effect of iron supplementation on conception in infertile iron deficient patients.

Methods
We retrospectively identified 62 infertile patients with iron deficiency, defined as ferritin level less than 30ug/l. They were treated with intravenous iron supplementation.

Results
The cause for infertility was unexplained in 29 of the 62 patients (46.8 %), which was more than expected. 55.2 % got pregnant after iron treatment, which can be considered as an excellent result. They had a long history of infertility (mean 33.6 months) before iron supplementation. Four of them had no previous infertility treatment, the remaining 12 had in mean 2.25 previous IVF treatments. Fifteen have ongoing pregnancies or have delivered, one has had a spontaneous abortion. The hemoglobin had been measured in 13 of these patients. Despite of low ferritin level only 1 had a hemoglobin lower than 120g/l.

In 4 patients (aged 36 – 41 years) with tubal infertility, the ferritin levels were low, 8-9 ug/l. Three of them got pregnant after iron supplementation.

Conclusion
Low iron reserve is ignored as a reason for unexplained fertility.
A Telephonic Diabetes Coaching Program improves Quality of Life metrics in T2DM patients.

David Segal  
Clinical, South Africa

Background: Emotional distress is an important dimension in diabetes and affects not only the patient’s experience of disease and care, but also their adoption, adherence and persistence with beneficial treatment and lifestyle regimens. Guidepost provides telephonic DSME/S coaching patient support to T2DM patients initiating/or struggling on insulin.

Methods: A retrospective analysis was performed on the findings of a Problem Areas in Diabetes (PAID) questionnaire that was routinely administered to patients upon entry and exit from the 6 month patient support program (PSP).

Results: 215 patients completed both an entry and exit questionnaire between February 2016 and May 2017. After completing the coaching program, scores improved for 80% of the measures, with a 50% improvement in the following areas: Knowing enough about diabetes, Not accepting diabetes, Feeling alone with diabetes; a 40% improvement in Feelings of depression, Feeling uncomfortable in social situations, Feeling scared or burned out, Feeling discouraged by their diabetes treatment plan and coping with diabetes. Most patients felt satisfied with their diabetes doctor. Additional common problem areas identified included: not having clear and concrete goals, coping with complications, constant concern over food and eating, worrying about hypoglycaemia, feelings of guilt and anxiety when getting off track with control, worrying about the future and the possibility of serious complications.

Conclusion: DSME/S delivered telephonically by diabetes coaches improves patients quality of life by addressing common problem areas in diabetes.
<table>
<thead>
<tr>
<th>Problem Area in Diabetes</th>
<th>Average Rating of Problem at Start</th>
<th>Average Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing enough about diabetes?</td>
<td>3.14</td>
<td>-0.77</td>
<td>-35%</td>
</tr>
<tr>
<td>Not &quot;accepting&quot; your diabetes?</td>
<td>0.98</td>
<td>-0.56</td>
<td>-57%</td>
</tr>
<tr>
<td>Feeling alone with your diabetes?</td>
<td>0.83</td>
<td>-0.43</td>
<td>-51%</td>
</tr>
<tr>
<td>Feeling depressed when you think about living with diabetes?</td>
<td>1.52</td>
<td>-0.74</td>
<td>-48%</td>
</tr>
<tr>
<td>Not having clear and concrete goals for your diabetes care?</td>
<td>1.51</td>
<td>-0.73</td>
<td>-48%</td>
</tr>
<tr>
<td>Uncomfortable social situations related to your diabetes care (e.g., people telling you what to eat?)</td>
<td>1.39</td>
<td>-0.64</td>
<td>-46%</td>
</tr>
<tr>
<td>Feeling scared when you think about living with diabetes?</td>
<td>1.64</td>
<td>-0.76</td>
<td>-46%</td>
</tr>
<tr>
<td>Feeling &quot;burned out&quot; by the constant effort needed to manage diabetes?</td>
<td>1.18</td>
<td>-0.54</td>
<td>-45%</td>
</tr>
<tr>
<td>Feeling unsatisfied with your diabetes doctor?</td>
<td>0.62</td>
<td>-0.27</td>
<td>-46%</td>
</tr>
<tr>
<td>Feeling angry when you think about living with diabetes?</td>
<td>1.13</td>
<td>-0.50</td>
<td>-46%</td>
</tr>
<tr>
<td>Feeling discouraged with your diabetes treatment plan?</td>
<td>1.07</td>
<td>-0.46</td>
<td>-40%</td>
</tr>
<tr>
<td>Coping with complications of diabetes?</td>
<td>1.60</td>
<td>-0.60</td>
<td>-40%</td>
</tr>
<tr>
<td>Feeling overwhelmed by your diabetes?</td>
<td>1.33</td>
<td>-0.52</td>
<td>-39%</td>
</tr>
<tr>
<td>Feeling constantly concerned about food and eating?</td>
<td>1.76</td>
<td>-0.68</td>
<td>-39%</td>
</tr>
<tr>
<td>Feeling that diabetes is taking up too much of your mental and physical energy every day?</td>
<td>1.66</td>
<td>-0.56</td>
<td>-39%</td>
</tr>
<tr>
<td>Feeling that your friends and family are not supportive of your diabetes management efforts?</td>
<td>0.62</td>
<td>-0.24</td>
<td>-39%</td>
</tr>
<tr>
<td>Not knowing if your mood or feelings are related to your diabetes?</td>
<td>1.07</td>
<td>-0.63</td>
<td>-38%</td>
</tr>
<tr>
<td>Feelings of deprivation regarding food and meals?</td>
<td>1.46</td>
<td>-0.53</td>
<td>-36%</td>
</tr>
<tr>
<td>Doing the exercise that you know is helpful?</td>
<td>1.56</td>
<td>-0.55</td>
<td>-36%</td>
</tr>
<tr>
<td>Worrying about low blood sugar reactions?</td>
<td>1.66</td>
<td>-0.64</td>
<td>-39%</td>
</tr>
<tr>
<td>Feeling in control of your weight?</td>
<td>1.75</td>
<td>-0.57</td>
<td>-33%</td>
</tr>
<tr>
<td>Feelings of guilt or anxiety when you get off track with your diabetes management?</td>
<td>2.08</td>
<td>-0.66</td>
<td>-33%</td>
</tr>
<tr>
<td>Injecting your insulin?</td>
<td>0.59</td>
<td>-0.18</td>
<td>-30%</td>
</tr>
<tr>
<td>Worrying about the future and the possibility of serious complications?</td>
<td>2.94</td>
<td>-0.70</td>
<td>-28%</td>
</tr>
<tr>
<td>Feeling satisfied with your sex life?</td>
<td>1.68</td>
<td>-0.56</td>
<td>-26%</td>
</tr>
<tr>
<td>Injecting your insulin at the right time?</td>
<td>0.84</td>
<td>-0.21</td>
<td>-25%</td>
</tr>
<tr>
<td>Getting a good night’s sleep?</td>
<td>1.22</td>
<td>-0.29</td>
<td>-24%</td>
</tr>
</tbody>
</table>
Background: T2DM is a complex disorder dependant on self-management to achieve desired outcomes. There are numerous potential barriers to adoption, adherence and persistence with self-care behaviours. Guidepost provides a telephonic DSME and DSMS coaching service to patients initiating/or struggling on insulin as part of a PSP. The PSP uses a barrier assessment framework to identify problem areas that may be impeding a patient’s progress in self-managing their condition.

Methods: A retrospective review of 2736 patients enrolled on the PSP between 1 June 2015 and 31 May 2018 was performed to identify common barriers identified by patients. A total of 36 barriers were assessed for each patient. Barriers were rated on a 4 point scale: 1 not a problem, 2 a minor problem, 3 a moderate problem and 4 a severe problem.

Results: A total of 82,202 barriers were assessed. The most commonly identified barriers (descending order) were healthy eating, activity level, diabetes disease knowledge, weight concerns, hypoglycaemia, worrying about diabetes complications, sexual dysfunction, poorly defined goals and targets, sleep disturbance, insulin timing, not coping, co-morbidities, intercurrent stressful periods, affordability, availability of chronic supplies and occupation. Patients tended to have a binary view on barriers mostly reporting that barriers were either not a problem or a severe problem.

Conclusions: Real-world data from this PSP has identified a set of commonly occurring barriers to glycaemic control and diabetes self-management that provide targets for intervention.
Telecoaching Based On Structured SMBG Data Improves Control In Insulinized T2DM Patients.

David Segal  
*Clinical, South Africa*

Background: T2DM is a progressive condition often requiring insulin to meet glycaemic targets. Delays in initiation, failure to optimise doses and intensify regimens results in real-world outcomes that fail to meet expectations. Data-driven ongoing diabetes education and support has the potential to improve patient outcomes.

Methods: Patients initiating or struggling on insulin who were referred by their physician for enrollment onto the 6 month telecoaching program between 1 June 2015 and 31 May 2018 were analysed retrospectively. Coaching sessions were based upon structured SMBG data (pre-meal and bedtime readings on 3 consecutive days). SMBG patterns were used to identify areas for behaviour change or dose optimization aimed at normalizing SMBG readings at all measured time points.

Results: 2491 patients completed the program, providing 157,495 readings for analysis. The average BG (mmol/l) at each measured time point improved over the 6 months as follows: Bedtime 10.3 to 8.5, Pre-dinner 9.7 to 8.0, Pre-lunch 9.2 to 7.7 and Pre-breakfast 9.0 to 7.5. The mean HbA1c for all participants with available data declined from 10.5% to 8.1%. The percentage of hypoglycaemic readings (BG 4.0mmol/l) declined from 9.8% to 2%.

Conclusions: Telecoaching focusing on structured SMBG data results in an improvement in overall glycaemia as measured by HbA1c. Actively seeking to optimise glycaemic control at all measured times across the day improves the average BG at each time point while also reducing BG variability and hypoglycaemia.
Increased Risk for Secondary Female Cancer Development in Survivors of Colorectal Cancer: A Nationwide Population-based Cohort Study

Dong Ho Lee
Department of Internal Medicine, South Korea

Aims: We aimed to evaluate the incidence rate and risk factors of female (breast, ovary, uterine cervix/corpus) cancers among survivors of CRC.

Methods: This study is the result of 5.8-years follow-up observation of patients registered in the NHIC for the first diagnosis of CRC from 2012 to 2017. Each CRC patient was age-matched with five women who were not diagnosed with CRC. Primary outcome was newly developed female cancers. Among them, additional analysis was conducted for those who had medical checkup data.

Results: The 56,682 CRC patients and 288,119 age-matched general population was collected. The risk of female cancer was higher in the CRC patients than in the control group (HR 2.91; P<0.001). The risk of ovarian cancer was the highest (HR 6.72) in survivors of CRC, followed by uterine corpus cancer (HR 3.99), uterine cervical cancer (HR 2.82), and breast cancer (HR 1.85). Subgroup analysis using medical checkup data (14,190 CRC patients, 71,933 in the control group) also showed a higher risk of female cancer in CRC group. Patients with CRC less than 55 years of age (HR 3.51) have a higher risk of all female cancers than those older than 55 years (HR 2.59). The risk of female cancer was higher when CRC patients were underweight (18.5 kg/m²) or obese (≥30 kg/m²). Also, CRC patients with dyslipidemia had a higher risk of breast cancer.

Conclusion: Because CRC patients are at higher risk of being diagnosed with female cancer than the general population, careful surveillance is necessary.
Benign Stricture Due to Chronic Pancreatitis Mistaken for Distal Malignant Biliary Obstruction

Jong Jin Hyun
Internal Medicine, Ansan, Gyeonggi, South Korea

Biliary strictures frequently present a challenge of diagnosis between benign and malignant cause. A 36-year-old man presented with jaundice and dark urine. The patient had suffered abdominal discomfort, fatigue and anorexia. On the past history, the patient was chronic heavy alcoholism and current smoker. He had 5kg weight loss for three months. On the physical examination, icteric sclerae and mild abdominal tenderness on the right upper abdominal region were detected. A mango-sized mass was palpated on the right upper abdominal region. Lab tests revealed cholestatic pattern abnormality and elevated CA19-9 (181.9 IU/mL). Abdominal computed tomography (CT) revealed 3.5cm sized low attenuating mass-like lesion in pancreas head with bile duct and main pancreatic duct dilatation and this lesion was needed to make a differential diagnosis with pancreatic malignancy. Endoscopic retrograde cholangiopancreatography (ERCP) was performed and biopsy was taken on the distal common bile duct stricture lesion. Biopsy result was atypical gland, consistent with low grade dysplasia. After laboratory results and general condition recovered, pylorus preserving pancreatoduodenectomy (PPPD) was performed. Histologic examination of the resected specimen revealed inflammatory cell infiltration with fibrosis which was compatible with chronic pancreatitis and there was no malignant evidence. Final diagnosis was confirmed as benign stricture due to chronic pancreatitis. In this case, benign stricture caused by chronic pancreatitis was initially considered as malignancy. Because of weight loss, jaundice, laboratory abnormality (cholestatic pattern), long length of stricture and CA19-9 elevation, malignant biliary stricture was considered as a first impression. But, postoperative histologic examination of specimen confirmed a benign stricture due to chronic pancreatitis.
Initial Experience with Intragastric Balloon LEXBAL ® in the Treatment of Patients with Mild to Moderate Obesity (type I-II)

Fernando Robledo
Gastroenterology/Endoscopy, Buenos Aires, Buenos Aires, Argentina

Background: To evaluate the effectiveness and response Gastric balloon ( Lexbal ) in the treatment of mild to moderate obesity

Methods: We conducted in one clinic and Hospital Paroissien an observational, retrospective study. We have compiled the results of 12 follow intragastric balloons (Balon Lexbal ) in obese patients with mild to moderate type I- II (BMI between 28 and 34.9 kg/m2 ) placed in 2012 and 2015 losses have been achieved .. over 70 % of excess weight . Furthermore, it has been observed satisfaction of our patients

Measurements: Descriptive observational study in which the sample is made up of the 12 patients treated with balloon LEXBAL in our midst.

The variables studied were age , sex , weight , BMI , percentage of weight lost , fill volume , tolerance, satisfaction and dietary monitoring by patients

Results: Over 80 % degree of patient satisfaction , 70 % decrease in weight above the average ( over 12 kilos ) better response in those presenting adherence to nutritional treatment and no differences were observed in the volume of filling the balloon.

Conclusions: Treatment with intragastric balloon, along with a nutritional monitoring allows us to re-educate the patient, and change their eating habits. • Just for gradual diet, and to adapt each phase as tolerated by the patient, helps us to improve dietary behavior and facilitates greater weight loss The intragastric balloon is a safe, well tolerated, with few adverse effects and relatively simple in the hands accustomed to endoscopic practice. We believe it can be considered an effective adjunctive therapy in selected cases of mild / moderate obesity.
Investigation on the Frequency of the Combination of the Pancreatic Malignant Tumors and the Methods of Follow-Up of Patients with IPMN

Tatsuya Toyokawa  
Gastroenterology, Fukuyama, Hiroshima pref., Japan

Background: The appropriate follow-up methods to detect the pancreatic malignant tumors in patients with IPMN remain controversial. This study aimed to evaluate the frequency of the pancreatic malignant tumors and the most precise follow-up methods in patients with IPMN.

Methods: We enrolled 163 cases of patients with IPMN and investigated the frequencies and the features of the combination of the pancreatic malignant tumors as well as the modality and timing to detect them.

Results: Overall, 163 cases included 91 males and 72 females, and the mean age was 70 years. 63 cases corresponded to one or more criteria of worrisome features or high-risk stigmata. We detected 14 cases with pancreatic malignant tumors (pancreatic ductal cancer, 6 cases; IPMC, 8 cases). These 14 cases were diagnosed by the following modalities: enhanced CT (n = 6), MRI (n = 4), US (n = 1), ERCP (n = 1), and EUS (n = 2). The only significant factor was an abrupt change in caliber of pancreatic duct with distal pancreatic atrophy. The larger diameter of the cysts tended to have more frequency, but not significant, for the combination of the pancreatic malignant tumors. 27 patients died because of the pancreatic malignant tumors (n = 6) and other diseases (n = 21).

Conclusions: We concluded that the most useful methods during the follow-up were the less invasive CT and MRI but not the more invasive EUS. Special attention should be given on the abrupt changes in caliber of pancreatic duct with distal pancreatic atrophy.
Recently, many patients have a PPI prescription for a long time with various reasons. But the long term use of PPI may cause some problems such as osteoporosis, atrophy, vitamin B\textsubscript{12} deficiency and pneumonia etc. Until now, problems with long term use of PPI are not appropriately explored. The aims of this study were evaluate of safety issue for long term PPI prescription. Seventy five enrolled subjects were prescribed PPI for more than 1 year for frequent symptomatic relapse, and high risk group of NSAID or aspirin prescription. Every 6 months, gastrin, pepsinogen 1, pepsinogen 2, vitamin B\textsubscript{12}, calcium and phosphorus were checked. The gastrin levels were significantly increased from 95.6 pg/ml to 158.4 pg/ml and 152.9 pg/ml, 6 months and 12 month respectively(p<0.05). The pepsinogen 1/2 ratio as atrophic change at baseline, 6 month and 12 month were decreased significantly 6.1, 5.9, and 5.7 respectively(p<0.12 were not different. The long-term use of PPI may cause serological atrophic change. But the vitamin B\textsubscript{12}, calcium and phosphorus were not influenced with long term use of PPI.
Adropin, Preptin, and Irisin Levels In Non-Alcoholic Fatty Liver Disease

Oguzhan Dizdar

Internal Medicine, Turkey

Background: Preptin, adropin and irisin, are peptidic hormones critical for regulating energy metabolism. In this study, we investigated the serum concentrations of irisin, adropin and preptin in nonalcoholic fatty liver disease (NAFLD) patients and determined whether irisin, adropin and preptin levels correlate with other commonly used biochemical parameters in clinical medicine.

Methods: A total of 36 consecutive patients diagnosed as biopsy-proven NAFLD and 29 age-gender matched healthy subjects were enrolled. Serum irisin, adropin and preptin levels, anthropometric and biochemical measurements were made.

Results: Serum adropin levels were significantly lower in NAFLD patients than healthy controls. Although serum preptin level was lower and irisin level was higher in NAFLD group, there was no significant difference between NAFLD patients and healthy controls with respect to serum irisin and preptin levels. There was a strong positive correlation between adropin and preptin level. In multiple logistic regression analysis, only significant factor associated with NAFLD was body mass index (BMI). Dividing the all patients into two groups according to BMI, the levels of adropin and preptin were found to be significantly lower in the obesity group.

Conclusions: Serum preptin concentrations were strongly associated with adropin levels in NAFLD patients and serum adropin levels were lower in patients with NAFLD as compared with control subjects. Therefore, we suggest that the assessment of adropin and preptin, but not irisin, may be a reliable indicator of NAFLD and obesity. BMI was found to be only factor that was independently associated with NAFLD.
Study For Cases of Recurrence After Endoscopic Resection in Early Gastric Cancer

Jeongho Kim
Internal medicine, Goyang-si, Gyeonggi-do, South Korea

Introduction: Endoscopic Resection (Er) is widely accepted treatment for early gastric cancer (Egc), but little is known about recurrence after Er.

Aims & Methods: The aim of this study is to investigate cases of recurrence after Er for Egc. We performed a retrospective review of medical records of 126 patients with Egc underwent Er.

Results: The median follow-up period was 26.7 months. During a follow-up, a total of 10 patients (7.94%) developed recurrence in enrolled patients. According to univariate logistic regression analysis, piecemeal resection (Odds Ratio [Or] 7.067, 95% Confidence Interval [CI] 1.706-29.285, P=0.007) and tumor-positive resection margin (Or 33.292, 95% CI 7.064-159.904, P<0.0001) were significant risk factors for cancer recurrence after Er. However, there was no significant factor for recurrence in multivariate logistic regression analysis.

Conclusion: This study showed that piecemeal resection and tumor-positive resection margin were probable risk factors for recurrence after ER for EGC. Therefore, a study in a large number of patients and a longer period might show that piecemeal resection and tumor-positive resection margin are risk factors for recurrence.

Table 1. Basic character of Patient underwent ER for EGC

<table>
<thead>
<tr>
<th>Character</th>
<th>Total (n=126)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>96 (76.2%)</td>
</tr>
<tr>
<td>female</td>
<td>30 (23.8%)</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td>&lt;65</td>
<td>55 (43.7%)</td>
</tr>
<tr>
<td>≥65</td>
<td>71 (56.4%)</td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>91 (72.2%)</td>
</tr>
<tr>
<td>Yes</td>
<td>35 (27.8%)</td>
</tr>
<tr>
<td>Method</td>
<td></td>
</tr>
<tr>
<td>EMR</td>
<td>21 (16.7%)</td>
</tr>
<tr>
<td>ESD</td>
<td>105 (83.3%)</td>
</tr>
<tr>
<td>Resection</td>
<td></td>
</tr>
<tr>
<td>En bloc</td>
<td>112 (88.9%)</td>
</tr>
<tr>
<td>Piecemeal</td>
<td>14 (11.1%)</td>
</tr>
<tr>
<td>Additional treatment</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>119 (94.4%)</td>
</tr>
<tr>
<td>APC</td>
<td>7 (5.6%)</td>
</tr>
<tr>
<td>Gross type of lesion</td>
<td></td>
</tr>
<tr>
<td>Elevated, flat</td>
<td>66 (54.0%)</td>
</tr>
<tr>
<td>Depressed</td>
<td>58 (46.0%)</td>
</tr>
<tr>
<td>Pathology (differentiation)</td>
<td></td>
</tr>
<tr>
<td>Well, Moderate</td>
<td>118 (93.7%)</td>
</tr>
<tr>
<td>Poor</td>
<td>8 (6.3%)</td>
</tr>
<tr>
<td>Lateral margin of specimen</td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>11 (8.7%)</td>
</tr>
<tr>
<td>Negative</td>
<td>115 (91.3%)</td>
</tr>
<tr>
<td>H. pylori infection</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>109 (86.5%)</td>
</tr>
<tr>
<td>Yes</td>
<td>17 (13.5%)</td>
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<tr>
<td>Table 2. Univariate logistic regression</td>
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<tr>
<td>Sex</td>
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<tr>
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<tr>
<td>female</td>
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<td>Methods</td>
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<td>EMR</td>
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<tr>
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<td></td>
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<tr>
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<td>Lateral margin of specimen</td>
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<tr>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Normal (n=116)</th>
<th>Recurrence (n=10)</th>
<th>P-value</th>
<th>OR</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>90 (77.6)</td>
<td>6 (60.0)</td>
<td>0.248</td>
<td>1.000</td>
<td>0.605-8.798</td>
</tr>
<tr>
<td>female</td>
<td>26 (22.4)</td>
<td>4 (40.0)</td>
<td>0.999</td>
<td>1.000</td>
<td>0.315-4.393</td>
</tr>
<tr>
<td>&lt;65</td>
<td>51 (44.0)</td>
<td>4 (40.0)</td>
<td>0.62</td>
<td>1.000</td>
<td>0.066-1.009</td>
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<tr>
<td>&gt;65</td>
<td>65 (56.0)</td>
<td>6 (60.0)</td>
<td>0.014</td>
<td>1.000</td>
<td>1.706-29.285</td>
</tr>
<tr>
<td>EMR</td>
<td>17 (14.7)</td>
<td>4 (40.0)</td>
<td>0.123</td>
<td>1.000</td>
<td>0.793-26.478</td>
</tr>
<tr>
<td>ESD</td>
<td>99 (85.3)</td>
<td>6 (60.0)</td>
<td>0.004</td>
<td>1.000</td>
<td>7.067</td>
</tr>
<tr>
<td>En bloc</td>
<td>106 (91.4)</td>
<td>6 (60.0)</td>
<td></td>
<td>1.000</td>
<td>7.067</td>
</tr>
<tr>
<td>Piecemeal</td>
<td>10 (8.6)</td>
<td>4 (40.0)</td>
<td></td>
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</table>

Keywords: Cancer recurrence, Early gastric cancer, Endoscopic resection
The Difference of the Gut Microbiota of Gastric Cancer in Relation to Helicobacter Pylori Negativity and Positivity

Dong Ho Lee

Department of Internal Medicine, Seongnam, South Korea

Helicobacter pylori (HP) is known as one of the major risk factors for gastric cancer. In this study, we have compared the intestinal microbiota composition related to HP status among gastric cancer patient using 16SrRNA gene-based metagenomic sequencing analysis and culture-based method.

Stool samples were collected from 18 gastric cancer patients. 16S rRNA genes were sequenced on the Illumina Miseq platform and further analyzed to evaluate the gut bacterial community. The bacteria strains of fecal sample were isolated in aerobic and anaerobic condition.

Metagenomics analysis of fecal sample showed 4 major phyla; Firmicutes, Bacteroidetes, Proteobacteria and Actinobacteria were dominant. Firmicutes were the most dominant phylum. Within this phylum, the relative abundance of Clostridiales including Ruminococcus was higher in the HP(-) group, whereas Lactobacillales including streptococcus was higher in HP(+) group. In addition the relative abundance of Bacteroidetes in HP(-) group and Actinobacteria (especially, genus Bifidobacterium) in HP(+) group was observed highly.

In the bacterial culture-based approach, bacteria strains belonged to Clostridiales such as Clostridium perfringens, Ruminococcus feacis, Blautia sp., Coprococcus comes were isolated in HP(-) sample. In HP(+) sample, Klebsiella pneumoniae, Klebsiella variicola, Bacteroides dorei, Bifidobacterium adolescentis, Bifidobacterium longum were isolated. Bacillus species, Escherichia/Shigella was enriched regardless of HP exist. Streptococcus was not cultivated in HP(+) group, but isolated in HP(-) group in contrast with metagenome data.

In spite of the difference in approaching method, we found the intestinal bacterial diversity was lower in the HP(+) and gut microbial composition was different between HP(+) and HP(-).
Predictors of Low Adherence to Oral 5 Minosalicylic Acid in Patients with Ulcerative Colitis

Tae Oh Kim¹
Internal Medicine, South Korea

Background: 5-aminosalicylic acid (5-ASA) is the first-line treatment to induce and maintain remission of ulcerative disease (UC). Adherence is an important factor in determining disease activity in UC. This study aimed to identify predictors of low adherence to 5-ASA medication in the Korean UC patients.

Methods: A cross-sectional study was conducted at 6 university hospitals in Korea between July 2017 and January 2018. Enrolled patients were requested to complete the modified Morisky Medication Adherence Scale (MMAS-8) questionnaire and a survey of sociodemographic data. Adherence was classified as low (MMAS-8 scores: 6), medium (MMAS-8 scores: 6-7), and high (MMAS-8 scores: 8).

Results: A total of 259 UC Patients were enrolled in this study. The mean age of patients was 44±14 years old; 43.6% were female and 49.8% had low adherence to 5-ASA. In univariate analysis, young age with

Conclusion: Almost 50% of UC patients reported low adherence to 5-ASA. Predictors of low adherence were young age with
Acute Toxic Hepatitis Associated with Nitrofurantoin use in Chronic Hepatitis B Infection

Betul Erismis

Internal Medicine, Istanbul, Turkey

Introduction: Kidney damage due to nitrofurantoin can lead to acute or chronic hepatitis-like syndrome.

Case: A 44-year-old patient with known chronic hepatitis B who received telbivudine treatment applied to the patient with a complaint of yellowing in the eyes. It was learned that he used nitrofurantoin 1 week before due to symptoms of upper respiratory tract infection. He had 25 pack/year smoking and sometimes alcohol using story. Hepatosplenomegaly and the scleral icterus were detected. In laboratory tests; AST 1423, ALT 1143 U/L, GGT 177 U/L, ALP 166 U/L, total bilirubin 22mg/dl, direct bilirubin 21mg/dl, alpha-fetoprotein 519ng/mL, 60μg/dL of ammonia, INR 1.23, prothrombin time of 15 seconds and albumin 3.7mg/dL. In the abdominal ultrasonography, the liver size was 180mm and the parenchyma echogenicity was observed to be increased in accordance with grade 1 hepatosteatosis. As a result of magnetic resonance cholangiography, hyperintense signal increases in the liver length of 216mm and right and left lobe portal vein neighbors were reported to be compatible with acute hepatitis. HBV-DNA, delta antigen and autoimmune markers were negative. Pathology result of the patient with liver biopsy was reported as severe confluent necrosis in the parenchyma and acute canalic cholestasis. Prednisolone 40mg administered intravenously. In the follow-up period, AST 126 U/L, ALT 100 U/L, GGT 120 U/L, ALP 205 U/L, total bilirubin 1.52mg/dl, direct bilirubin 0.95mg/dl, albumin 3.25g/dl, prothrombin time was 14s.

Conclusion: It should never be forgotten that patients with chronic viral hepatitis should be cautious about the use of drugs and alcohol, and that side effects may occur as far as liver failure.
Esophageal Achalasia Manifestation as Coma: a Case Report of Atypical Urgent Clinical Situation

Michal Tichy
Gastroenterology, Usti nad Labem, Ustecky kraj, Czech Republic

**Background**: Achalasia is most frequently diagnosed between 25-60 years of age. Reported incidence is 1/100 000 per year. Symptoms, most commonly dysphagia (90%) and chest pain (40%), usually appear several years before diagnosis. Aspiration is rare (8%). Sudden unconsciousness due to achalasia is reported sporadically.

**Results**: Old female had been admitted to emergency department of a hospital, complaining of retrosternal pain and dyspnoea. Several minutes upon admission, she suffered acute respiratory arrest, that required urgent orotracheal intubation and artificial ventilation, her initial Glasgow coma scale being only 3. CT scan was performed and esophageal dilation 6x9x20 cm and aspiration pneumonia was found (fig 1 and 2). After suction of esophageal content endoscopy confirmed the diagnosis of achalasia (fig.3 and 4). Balloon dilation of the cardia was performed. The orotracheal intubation could be terminated on the next day and patient was transferred to a standard ward. Aspiration pneumonia was treated with antibiotics. After one week, second dilation was performed. Pseudoachalasia was excluded.

After ten days of hospitalization stay, the patient was discharged home. At endoscopy after 2 months, there was an apparent reduction of the esophageal dilation, no stagnation and cardia was freely passable for the therapeutic endoscope, patient tolerated standard diet. Esophageal biopsy did not show any dysplasia or malignancy.

**Discussion**: Permanent treatment of achalasia by myotomy or POEM might be considered. Though, we respect the will of the patient who wants maximum conservative approach. Considering her age (85 yers) the potential risk of invasive approach is too high.
The Frequency of Helicobacter Pylori and Its Association with Laboratory Parameters in Patients with Celiac Disease

Aysun ISKLAR

Department of Internal Medicine, Istanbul, Istanbul, Turkey

Background: The association between Celiac disease (CD) and H. pylori (HP) infection hasn’t been fully understood (1,2). In our study, it was aimed to investigate whether there is a relationship between CD and HP by comparing titers of CD antibody and from duodenal biopsy data.

Methods: We reviewed medical records of 67 adult patients with CD diagnosed from January, 2012 and December, 2012. The patients with CD who had no available endoscopy results were excluded. The study included only patients in whom gastric and duodenal biopsies were performed simultaneously. In duodenal biopsy, villous atrophy (VA), crypt hyperplasia (CH) and lymphocyte/enterocyte ratio (LER) were recorded. Data regarding tissue transglutaminase type 2 (tTG) antibody and anti-endomysial antibody (EMA) were extracted from medical records. The patients were stratified into 2 groups according to HP status (positive or negative).

Results: The study included 17 men and 50 women aged 16-59 years (mean age: 36.6 years). The HP was positive in 31 patients (46.2%) whereas negative in 36 patients (53.8%). No significant association was detected between antibody positivity and HP. It was found that there was a significant association between HP positivity and VA (p=0.1) while HP positivity was significantly associated with and CH and LER (p=0.03).

Conclusion: In conclusion, since changes in CH and LER (but not VA) are non-specific findings and could also be seen in early stage of CD, the diagnosis of false-positive could be prevented by performing duodenal biopsy following HP eradication in patients with CD.
A 28-year old male presented to emergency department with complaints of abdominal pain, jaundice, and itching continuing for 13 days. At physical examination, the patient in icteric appearance, he had tenderness to palpation in the right upper-quadrant of his abdomen and Murphy’s sign was negative, there was inguinal and axillary LAP. At laboratory examinations: ALP: 369; GGT: 441; ALT: 112; AST: 86; Total bilirubin: 4.77; Direct bilirubin: 1.81; WBC: 13.600, ESH was 63. Anti-CMV IgG: 142.3-positive; CA 19-9: was high with a value of 148.59: CEA and AFP were low. At the hepatobiliary US: the wall thickness of the gallbladder was 4 mm (acute cholecystitis?), ductus choledochus was 11 mm, an appearance consistent with 9 mm calculus in proximal and dilated intrahepatic biliary ducts were seen. Multiple LAN with the biggest one in size of 27x15mm were observed in the porta hepatis. On abdominal CT was seen a lobulated collection area with septations in size of 55x40 mm extending to the caudate lobe in liver segment 4. At MR-MRCP, the followings were observed; some of them cavitating and some of them conglomerated LAP with the biggest one in size of 5 cm; intrahepatic biliary tract dilatation. The aspirate sample was taken from the liver lesion and supraclavicular LAP was excised. M. tuberculosis complex grew at mycobacterial culture media in a week. After four-drug anti-TB therapy total bilirubin and direct bilirubin regressed to a level of 0.6 and 0.4, respectively within two months.
Aim: Recent studies have shown a correlation between the severity of H. Pylori infection and the neutrophil / lymphocyte ratio (NLO) and thrombocyte / lymphocyte ratio (TLO). The aim of this study was to investigate the relationship between H. Pylori infection and neutrophil / lymphocyte ratio (NLO) and platelet / lymphocyte ratio (TLO) in patients with dyspepsia symptoms.

Materials and Methods: A total of 448 patients, who were underwent gastroscopy at the endoscopy unit of Taksim Training and Research Hospital were analyzed retrospectively. Histopathological evaluation of midline biopsies according to H. pylori presence were classified as H. Pylori positive and H. Pylori negative group. The relationship between neutrophil / lymphocyte ratio (NLO) and thrombocyte / lymphocyte ratio (TLO) was evaluated in relation with H. Pylori presence.

Results: According to H. pylori presence, NLO and TLO measurements of the cases did not show statistically significant difference (p 0.05). Correlation analysis between H. Pylori positive group and NLO revealed a statistically significant correlation (r = -0.270, p = 0.002, r: -0.162, respectively) between iron and ferritin measurements (decreased NLO level as iron level increased) p = 0.032). Again with TLO, there was a statistically negative correlation between HGB, MCV, iron and ferritin measurements (r: -0.310, p = 0.001, r: -0.187, p = 0.001, r: -0.335, p = 0.001; r: -0.290; p = 0.001).

Conclusion: The results of our study do not revealed an association between H.pylori presence and inflammatory response which is evaluated by NLO and TLO measurements in patients with dyspepsia.
Peutz-Jeghers Syndrome with HIV / HBV Co-Infection, Chronic Myeloid Leukaemia and Possible Renal Cell Carcinoma – a Case Report

Sarusha Pillay

Division of Internal Medicine, Durban, KwaZulu-Natal, South Africa

Introduction: Peutz-Jeghers syndrome (PJS) is an autosomal dominant condition due to mutation in the STK11 tumour suppressor gene. Key characteristics include melanic macules and hamartomatous polyps. Patients have an increased risk of developing a variety of malignancies. Herein we report a case of PJS diagnosed with a number of conditions with which it is not typically associated or described.

Case report: A 34yr old man known with PJS previously requiring surgery for intussusception and numerous endoscopies with polypectomies had a markedly increased white cell count ($113 \times 10^9$). He was asymptomatic. Examination revealed generalized discrete lymphadenopathy (1cm) and no hepatosplenomegaly. He was positive for human immunodeficiency virus (HIV) and hepatitis B virus (HBV) infection. Abdominal CT scan identified a right renal mass worrying for carcinoma and an enlarged spleen. A bone marrow aspirate and trephine biopsy plus chromosomal analysis showed a BCR/ABL transcription (Philadelphia chromosome) confirming chronic myeloid leukaemia (CML). Fine needle aspiration of an inguinal lymph node revealed malignant cells of uncertain origin. Hydroxyurea was commenced, anti-retroviral therapy initiated and elective surgery scheduled for lymph node excision plus partial nephrectomy. However, the patient developed bowel obstruction requiring emergency surgery and demised from a suspected pulmonary embolus post-operatively.

Conclusion: There has been no documented cases of PJS and CML and no association between HIV and CML previously demonstrated. Renal carcinoma (suspected in this case) in PJS is very rare. To the best of our knowledge, this may represent the first case of PJS, HIV, HBV, CML and possible renal carcinoma.
Introduction. Digestive tract infections can be caused by various microorganisms including bacteria, fungi, viruses and parasites. But only worms and protozoa which can cause gastrointestinal infections. Amebiasis is a disease of the large intestine caused by *Entamoeba histolytica*. Colonoscopy examination is useful to establish the diagnosis in amebiasis patients. Common symptoms of amebic colitis are chronic bloody diarrhea, abdominal pain and tenderness. Other symptoms include positive heme, abdominal pain, weight loss, fever and anorexia.

Case Report. A 54-years-old complaining of soft stool mixed with blood and mucus since 2 years ago. Patient also complaining abdominal pain every defecate, 3 to 5 times in a day. Patient having a subfebris fever, without decreasing of appetite or losing weight. General physical examination were normal, but abdominal examination showed tenderness in the right abdomen, with normal bowel sounds. Laboratory investigation showed normal results. Fecal examination showed brown stool with soft consistency, contain mucus and bacteria; without any amoeba, fungus, worm eggs, or clear blood. Colonoscopic examination showed grade I-II internal hemorrhoid, edematous mucosa, hyperemic, erosion, small ulcers, skip area and cobblestone appearance in rectum, sigmoid and ileocaecal area which consistent with Crohn’s disease, but Ulcerative Colitis and Infectious Colitis still considered. Diagnosis is established when trophozoid/cyst form of *Entamoeba histolytica* obtained from biopsy. After the diagnosis is established, the patient treated with Metronidazole 3x500 mg for 10 days. This treatment gave clinical improvement, defecation only once a day with solid feces, no mucus/blood, no abdominal pain.
Drug-induced acute pancreatitis: A hospital-based analysis

Hyoun Woo Kang
Internal Medicine, Goyang, South Korea

Background: Drug toxicity is a relatively rare cause of acute pancreatitis (AP). However, it might be underestimated because proving the causality is usually difficult. Although a lot of different drugs have been reported as the causes of AP, most of which were based on case reports or series. This study was to perform a hospital-based analysis on patients with drug-induced AP.

Methods: Patients diagnosed with AP at Dongguk University Ilsan Hospital between 2006 and 2016 were retrospectively reviewed. Those with probable or certain drug-induced AP were enrolled and analyzed thoroughly. The causality assessment was based on the standardization of World Health Organization-Uppsala Monitoring Centre system.

Results: A total of 21 (4.7%) patients (mean age, 63.8 years; male, 7) belonged to drug-induced AP among 450 patients with AP during the period. An average duration of hospital stay was 12 days. All patients underwent abdominal computed tomography, three (14.3%) of whom had necrotizing pancreatitis at diagnosis. The severity was as follows; mild 18 (85.7%), moderate 2 (9.5%), and severe 1 (4.8%). There was no case of mortality. Valproic acid was the most common drug (3/21, 14.3%), followed by several other drugs (atorvastatin, donepezil, linagliptin, losartan, and pemetrexed) with two cases each. Most cases belonged to “probable” drug-induced AP except for one “certain” case (donepezil) according to the causality assessment system. The one severe case was caused by losartan.

Conclusion: Drug-induced AP accounted for 4.7% of all AP, which was higher than the previously reported proportion. Valproic acid was most common causal drug in this study. More vigilant assessment for drug-induced AP is required.
Effectiveness Of *Helicobacter Pylori* Eradication In The Treatment Of Gastric MALT Lymphoma

Sam Ryong Jee  
Gastroenterology, Busan, South Korea

*Helicobacter pylori* eradication induces remission in most patients with gastric mucosa-associated lymphoid tissue (MALT) lymphoma. We investigated the effectiveness of *H. pylori* eradication therapy for gastric MALT lymphoma regardless of the *H. pylori* infection status. From January 2000 to December 2017, consecutive patients with stage-I gastric MALT lymphoma were enrolled in single centre retrospectively. A total of 83 patients were diagnosed with gastric MALT lymphoma and had received eradication therapy. The median age of the patients was 57 years (20–79 years). There were fewer male than female (M:F, 30:53) and male to female ratio was 1:1.8. The median time of follow-up was 37.2 months (range 5–153 months).

Of the 83 patients, *H. pylori* infection was detected in 68 patients (81.9%). The complete remission (CR) rate after eradication therapy was 79.5%, which was higher in *H. pylori*-positive patients than in *H. pylori*-negative patients (83.8% vs 60.0%, p<0.05). During the follow-up period, 57 (83.8%) of 68 in *H. pylori*-positive patients achieved CR, seven patients (10.3%) showed partial remission (PR), one patient (1.5%) did stable disease (SD), and only three patients (4.4%) had disease progression. Nine (60%) of 15 in *H. pylori*-negative patients achieved CR, one patient (6.7%) showed PR, two patients (13.3%) did SD, and three patients (20%) had disease progression. In conclusion, irrespective of the existence of bacteria, *H. pylori* eradication is worthwhile in the treatment of gastric MALT lymphoma.
Relation Between Helicobacter pylori Infection and Arterial Stiffness: Results from a Large Cross-Sectional Study

Seon Hee Lim
Department of Internal Medicine, Seoul, Seoul, South Korea

Background/Aims: Chronic systemic inflammation has been established as an important causative factor in the progression of atherosclerosis. However, the effect of chronic Helicobacter pylori (HP) infection on arterial stiffness, a predictor of progression of atherosclerosis, remains unclear. We evaluated the possible relation between HP infection and arterial stiffness in the Korean general population.

Methods: Arterial stiffness was evaluated using the cardio-ankle vascular index (CAVI). We included the subjects who underwent CAVI and anti-HP IgG antibody simultaneously for health screening. Demographic characteristics and laboratory examinations were compared according to the serostatus of HP infection. Multiple regression analysis was performed to predict the effects of HP infection status and other conventional risk factors for atherosclerosis on increased arterial stiffness.

Results: Among 1174 eligible subjects, HP seropositive male was 428 (428/740=57.8%), and seropositive female was 237 (237/420=57.1%). When multivariable analysis including conventional risk factors of arteriosclerosis and HP infection were performed, age, lower BMI, presence of hypertension, and diabetes were independently correlated with higher CAVI levels in male group. In the female group, HP infection (OR 1.68, 95% CI 1.01-2.80) as well as conventional atherosclerotic risk factors; age, hypertension, dyslipidemia were significantly associated with a higher CAVI levels after adjustment of BMI, smoking, alcohol, exercise, and diabetes.

Conclusions: In female, HP infection may be another significant risk factor for the development of atherosclerosis, although further study is needed.
Initial Experience with Intragastric Balloon LEXBAL® in the Treatment of Patients with Mild to Moderate Obesity (type I-II)

Fernando Robledo
Gastroenterology/Endoscopy, Buenos Aires, Buenos Aires, Argentina

Background: To evaluate the effectiveness and response Gastric balloon (Lexbal) in the treatment of mild to moderate obesity

Methods: We conducted in one clinic and Hospital Paroissien an observational, retrospective study. We have compiled the results of 12 follow intragastric balloons (Balon Lexbal) in obese patients with mild to moderate type I-II (BMI between 28 and 34.9 kg/m²) placed in 2012 and 2015 losses have been achieved over 70% of excess weight. Furthermore, it has been observed satisfaction of our patients

Measurements: Descriptive observational study in which the sample is made up of the 12 patients treated with balloon LEXBAL in our midst. The variables studied were age, sex, weight, BMI, percentage of weight lost, fill volume, tolerance, satisfaction and dietary monitoring by patients

Results: Over 80% degree of patient satisfaction, 70% decrease in weight above the average (over 12 kilos) better response in those presenting adherence to nutritional treatment and no differences were observed in the volume of filling the balloon.

Conclusions: Treatment with intragastric balloon, along with a nutritional monitoring allows us to re-educate the patient, and change their eating habits. Just for gradual diet, and to adapt each phase as tolerated by the patient, helps us to improve dietary behavior and facilitates greater weight loss. The intragastric balloon is a safe, well tolerated, with few adverse effects and relatively simple in the hands accustomed to endoscopic practice. We believe it can be considered an effective adjunctive therapy in selected cases of mild / moderate obesity.
Nonalcoholic fatty liver disease (NAFLD) is becoming a major public health problem. NAFLD has been recognized as a hepatic manifestation of metabolic syndrome, associated with systemic diseases such as cardiovascular disease (CVD) and chronic kidney disease (CKD). In this study the presence of posible liver disease detected by biochemical parameters and confirmed by Transient Liver Elastography (TE) in a group of the patients with different aetiology of chronic kidney disease (CKD) was investigated. Patients with various stages of CKD were divided in to the five subgroups in regards to aetiology. Liver stiffness was used to quantify liver fibrosis. Controlled attenuation parameter (CAP) was used to quantify liver steatosis. Functional liver tests and biochemical parameters of kidney function were measured to all the patients. Statistical analysis used in this study was a Decision tree as a predictive model to map observed variables resulting in the conclusion about outcomes. The application of existing laboratory’s parameters, in presence of the defined etiological factors of kidneys diseases, indicate on the development of hepatic diseases. Higher values of phosphorus and low values of feritin in patients with Autoimmune kidney disease, and Polycystic, expresses steatosis of the hepatic parenchyma. In contrary, low values of phosphorus and higher values of fertinin in patients with Nephroangiosclerosis, Diabetic nephropathy, and Glomerulonephritis and pyelonephritis, are in a favour steatosis of the hepatic parenchyma. Serum values of phosphorus and feritin are valuable predictors of the liver disease in patients with the terminal stage of kidney diseases of different aetiology.
Effects of Turkish Classical Music on Cognitive Function, Depression and Quality of Life in Elderly

Rukiye Pinar Boluktas
Nursing, ISTANBUL, Turkey

According to 2017 statistics, in Turkey, 46% of older people live alone in their homes, 55% have poor health perceptions, 18% face poverty, and 43% are unhappy. Prevalence of depression is between 14% and 20%. In 2013, rate of suicide was 6.5. However, the most of older people prefer to live in their community although they are lonely, they face poverty, and face limitations as a result of chronic diseases and disabilities. Community based care for older people is also encouraged by Ministry of Health as it is more cost-effective. Music therapy is a simple, effective, safe, and nonpharmacologic intervention that may be used to decrease depression and to improve cognition, and health related quality of life (HRQOL). In Turkish culture, music is typically described as “food for soul”. This study aimed to investigate the effect of Turkish classical music songs in 32 community dwelling older people. Participants were received interventions two or three times per week, 50-60 min per session, for 8 weeks at a day health center. Each intervention session started listening music for 15-20 min to get remember songs, then followed singing songs as a group. Participants were assessed at baseline (week 0), and two follow-up at month 1 and month 2. Compared to baseline, at two follow-up, we observed that cognition improved, depression decreased, and SF-36 scores, including 8 domains and two summary scores increased. We conclude that an intervention comprising listening and singing Turkish classical music improve cognition, depression and HRQOL in older people.
Mini Geriatric Assessment (MIGA) – A Novel Tool for Comprehensive Geriatric Assessment

Yaffa Lerman1,2

1Geriatrics, Tel Aviv, Israel
2Sackler School of Medicine, Israel

Background: Comprehensive geriatric assessment has become a widely accepted multidisciplinary diagnostic process for identifying medical, psychosocial, cognitive, and functional capabilities and limitations of older persons. However, it is time consuming and is not quantitative.

Objectives: To describe the “MIGA” (Mini Geriatric Assessment), a new evaluation tool, and to indicate its potential clinical applications for non geriatric clinicians.

Methods: 323 consecutive elderly patients who were admitted to the geriatric rehabilitation department participated. The MIGA is comprised of 20 items, whose total score ranges from 0-30. The items cover the basic aspects of geriatric assessment: walking and mobility, physical function, continence, eyesight and hearing, quality of life, cognitive function, falls, self-negligence, mood, support system and morbidity. MIGA results were compared to recognized and validated geriatric domain tests (i.e., Mini Cog, Timed Up and Go, etc.).

Results: 139 of the patients had low scores (0-15), 76 had medium range scores (16-19) and 108 had high scores (≥20). MIGA had internal reliability and test-retest reliability over 24 hours. Its validity was established by having significant correlation with validated tools (Mini Mental State Exam [MMSE]), with the number of medications. No correlation was found between the MIGA and the type or number of chronic conditions of the patients. The mean test duration was 8.3±4.7 minutes.

Conclusion: MIGA is a short, simple, quantified, easily administered and rapidly performed comprehensive geriatric assessment tool that has internal reliability and validity. It appears to be an effective test for evaluating in-patient geriatric population in non geriatric setting.
Does Hypernatremia Announce the End of Life in Elderly Patients?

Bruno Boietti¹

Internal medicine research unit, CABA, Buenos Aires, Argentina

Hypernatremia is common among hospitalized patients. Its severity lays in its clinical presentation and its potentially dangerous treatment.

Our goal was to describe the characteristics and treatment of these patients, as well as health care resources and their mortality.

Retrospective cohort with all adults patients admitted to the Emergency Department(ED) between January/2009 and December/2013 of Hospital Italiano de Buenos Aires. We included all who had hypernatremia on their early assessment and later required hospitalization; restricted to those affiliated to institucional health maintenance organization (PS). Data analysis was performed with secondary databases. Hypernatremia was defined as serum sodium =145mEq/L. All patients were followed from admission until discharge, death, disaffiliation or end of study. Time-to-event analysis was used.

During the study period there were 415683 consultations, of which 57552 required hospitalization; only 36178 were affiliated to PS. We included 122 cases of hypernatremia (prevalence 0.33%;95%CI:0.28-0.40%): 61.48% were female, with a median age of 81 (IQR 20), 49.18% were previously on Home Care and the average of time at the ED until hospitalization was 8.52 hours (SD 11.98). A high number of complementary studies were used as 97.54%(119) needed more than one of these: laboratory, ecography, CT scan and/or echocardiogram. In-hospital mortality rate was 32%. The global mortality rate (including follow up after discharge) was 35.25% at 30 days, and 40.16% at 90 days.

Hypernatremia is a severe hydroelectrolytic disorder with high mortality rate.
Effects of a Exercise Multicomponent Training Program on Cognition and Falls Risk Factors in Elderly Adults with Dementia

Joana Carvalho
1Research Centre in Physical Activity, Health and Leisure, Faculty of Sports, Porto, Portugal

Falls are one of the leading cause of mortality and morbidity in older people and the risk of falling is exacerbated by impaired mental status due to dementia. However, whether persons with dementia benefit from fall prevention exercise training is unclear.

This study aimed to evaluate the contribution of an exercise multicomponent training (MT) on cognition, balance, mobility and lower limbs muscle strength in the elderly with dementia as important risk factors for falling.

Sixty-four elders (78.5 ± 8.3 years) clinically diagnosed with dementia, were divided for convenience into two groups: Experimental Group (EG, n= 38) and Control Group (CG, n= 26). The EG participated in a 6-month supervised MT intervention (2 days/week, 60 min/session including aerobic, muscular resistance, flexibility, coordination and postural exercises). Cognitive function (MMSE), functional mobility (Time Up and Go - TUG - Test), balance and gait (POMA, Tinetti Index) and lower muscle strength (30-second Chair Stand) were assessed before and after 6 months of the experimental protocol.

A two-way ANOVA, with repeated measures, revealed significant group and time interactions on cognitive function, TUG and Tinetti Index, presenting the EG a significantly better performance over the time compared to the CG. However, no statistically significant main effect was founded on the lower muscle strength.

Our results suggest that a 6-month exercise multicomponent training can have a positive influence on the gait, balance, mobility and cognition, and therefore, seems to be an important strategy to reduce the risk of falling in dementia older adults.

Support from IPDJ and CIAFEL (UID/DTP/00617/2013).
Twelve-Year Trajectories of Sitting Time are Associated with Frailty in Middle-Aged Women

Maja Susanto$^{1,2}$

$^1$Faculty of Medicine, Brisbane, QLD, Australia
$^2$Geriatric Medicine, Brisbane, Queensland, Australia

Prolonged sitting time is associated with several health outcomes; with limited evidence reporting associations with frailty. The aims of this study were to identify patterns of sitting time over 12 years in middle-aged women and examine associations of these patterns with frailty in older age. Our study examined 5,462 women born in 1946-1951 from the Australian Longitudinal Study on Women's Health who self-reported socio-demographic attributes, daily sitting time and frailty in 2001, and then every three years until 2013. Frailty was assessed using the FRAIL scale (score 0 = healthy; 1-2 = pre-frail; 3-5 = frail) and group-based trajectory analyses identified trajectories of sitting time. We identified five sitting time trajectories: low (27.5%); medium (41.5%; reference); increasing (8.2%); decreasing (18.0%); and high (4.9%). In adjusted models, the likelihoods (odds ratio: 95% confidence interval) of being frail were statistically higher for those in the increasing (1.29: 1.03, 1.61) and high (1.42:1.10, 1.84) trajectories. In contrast, the low (0.86: 0.75, 0.98) trajectory group was less likely to be frail, with no difference in likelihood of frailty in the decreasing trajectory group. Our study suggests that patterns of sitting time over 12 years in middle-aged women predict frailty in older age.
The Impact Of Frailty On The Outcome Of Hospitalized Elderly Patients In South Africa

Susan Coetzer

Geriatrics, Johannesburg, Gauteng, South Africa

Objectives: To determine the impact of frailty measured clinically using the FRAIL scale in patients aged 65 years and older hospitalized in the urban South African environment.

Methods: An observational prospective cross-sectional study of patients admitted to the medical wards of Helen Joseph hospital and Wits Donald Gordon Medical Centre. Patients were evaluated for frailty according to the FRAIL scale. Nutritional status was determined using the mini-nutritional assessment (MNA®). Functional status was determined using the modified Rankin score. Patients had telephonic follow-up at 6 months to review their functional status and living environment.

Results: Of the 108 recruited patients 78 (72%) were assessed as frail by the FRAIL scale on admission. Hospital survival overall was 93.5%. All patients who died were classified as frail. Frail patients were older (81.0 vs. 77.3 years, p=0.027), more likely to be malnourished (90.3% vs. 9.7%, p<0.001), more functionally disabled (93.5% vs. 46.7%, p<0.0001) and more likely to have required care assistance prior to admission (70.5% vs. 36.7%, p=0.0029). There were no significant differences in polypharmacy, hospital length of stay, cognitive impairment, and gender. Follow-up data was available for 94 patients. Frail patients had higher mortality (39.5% vs. 4.3%, p=0.0013, RR 9.1 (95% CI 1.3-63). Frail patients had more functional impairment at hospital discharge than non-frail patients (98.6% vs. 30%, p<0.0001), but at 6 months follow-up there was no functional difference due to mortality.

Conclusion: The FRAIL scale has utility in identifying older patients at risk of mortality and in-hospital functional decline.
Dementia in Parkinson`s Disease.

Aida Kondybayeva

Department of neurology and neurosurgery, Almaty, Kazakhstan

In the clinical picture of Parkinson`s disease, non-motor symptoms acquire great importance, which lead to disability and a decrease in the quality of life of patients. To complaints with cognitive dysfunction, there often appear visual-spatial disturbances, which are one of the manifestations of the disease unfavorable for a patient`s life, have not been studied sufficiently to date.

Objective: to identify cognitive and visual-spatial disorders in patients with Parkinson`s disease.

Materials and methods: 18 women and 14 men with cognitive disorders were diagnosed with Parkinson`s disease. The age of patients varies from 60 to 75 years. The comparison group was comparable in age and sex, without CNS diseases.

All patients underwent clinico-neuropsychological, ophthalmological and, neuroimaging studies.

Results: In 65.6% of patients, dementia of mild severity was detected, in 28.1% of the average degree and in 6.25% of patients with severe degree. Recognition and copying of drawings, violation of spatial orientation, psychotic symptoms affecting visual and spatial perception were worse in the PD group than in the comparison group. Visual-spatial disturbances are most pronounced in patients with Parkinson`s disease with a severe degree of dementia.

We have also developed a useful model for testing patients with Parkinson`s disease, having visual and spatial and cognitive deficits, significantly improving the quality of the examination, which is also a rehabilitation simulator with similar disorders.

Conclusions: The visual-spatial deficit is most pronounced in patients with Parkinson`s disease with severe dementia.
Autoimmune hepatitis (AIH) is a chronic disease of unknown etiology, characterized by continuing hepatocellular inflammation and necrosis, with the tendency of progression to liver cirrhosis. The disease progress can be indolent and patient presentations are variable, ranging from totally asymptomatic to acute presentations of fulminant hepatic failure. Herein, we present two cases of autoimmune hepatitis. Case 1 is a 30 years old Chinese woman, housewife, previously healthy that presented with sudden decompensated liver cirrhosis (Child Pugh Class C) with severe portal and pulmonary hypertension. She was admitted twice in Internal Medicine ward due to decompensation of baseline disease, once related to right leg cellulitis and sepsis. In this case liver biopsy was not performed but diagnostic criteria score was compatible with definite AIH. Case 2 is a 63 years old Portuguese man, totally asymptomatic with incidental finding of elevated liver enzymes. The diagnostic workup, including liver biopsy confirmed AIH. Both had a good clinical progression in response to treatment. In this presentation we will discuss the diagnostic criteria for both cases, compare their characteristics and talk about the corresponding responses to treatment. Our aim is to demonstrate the varying initial presentations of autoimmune hepatitis calling for attention on the need of more awareness of the disease in all patients with unexplained liver impairment. AIH is relatively rare but fatal if untreated. Good treatment response if diagnosed and treated early.
57-year-old male patient, history of arterial hypertension, knee arthroscopy in December 2017 (in another institution), which enters on February 8 with fever and jaundice, denies transfusions and sexual behaviors without care. Acute severe hepatitis is diagnosed. Hepatitis B with positive surface antigen. It evolves in 4 days with failure of hepatic synthesis with repeated dose of factor V of 45%, total bilirubin of 13 mg-dl, lactate of 4.8 mmol-l, without hepatic encephalopathy, CURRENT MELD SCORE 30 POINTS. It was decided to perform a pre-transplant hepatic evaluation in urgent form. It evolves unfavorably at 8 days with hepatic encephalopathy, with factor V 5% Hepatic ultrasound, hepatic and cardiac echodoppler, abdominal, renal and urinary ultrasound, rx torax, laboratories with serology of HIV, HCV, Chagas, VEB, VDRL, HTLV, CMV were requested.
HCV-related Chronic Liver Disorder and Sleep Disturbance

Hiroto Tanaka
The Department of Internal Medicine, Wakayama City, Wakayama, Japan

Background: It has been reported that HCV-related chronic liver disorders, especially cirrhosis, are associated with sleep disturbance. We examined the relationship between HCV-related chronic liver disorders and sleep disturbance. Methods: The study population comprised 136 patients with HCV-related chronic liver disorders without neuropsychiatric impairment (87 patients with chronic hepatitis and 49 patients with liver cirrhosis). A total 323 examinees served as controls. Pittsburgh sleep quality index (PSQI) was used to assess sleep quality. The scores were summated to provide the PSQI scores; scores of 5 identified sleep disturbance. Results: The frequency of sleep disturbance was 33.4% (108/323) in controls, 35.6% (31/87) in patients with chronic hepatitis C, and 53.1% (26/49) in patients with liver cirrhosis. In the comparison between controls and patients with chronic liver disorders, time to sleep onset in chronic liver disorders group was significantly longer and the number of PSQI in its group was significantly higher. In the age-matched comparison between patients with chronic hepatitis and liver cirrhosis, time to sleep onset in liver cirrhosis was significantly longer and time of sleep in its group was significantly longer. In the patients with chronic liver disorders, time to sleep onset showed a significant negative correlation to albumin, HbA1c and the number of platelet. In addition, the number of PSQI showed a negative correlation to albumin and the number of platelet. Conclusion: Patients with HCV-related liver cirrhosis showed the significant increase in the frequency of sleep disturbance and the significant extension of the sleep onset time and sleep time.
Hepatocellular carcinoma (HCC) is one of the highly malignant tumors with a 5-year survival rate around 5%. A very unusual presentation of metastatic HCC is on the breast. Gynecomastia in men usually indicates breast cancer however we are presented with a case of distant metastasis to the breast secondary to HCC. To the best of our knowledge, only six cases of breast metastasis from HCC have been reported in literature and the first case reported in the Philippines.

We report a case of a 52-year-old male presenting with unilateral left subareolar ovoid solid mass measuring 5x5 cms, with an initial ultrasound guided core needle biopsy result of a papilloma. A computed tomography scan of the chest revealed a destructive bone changes in the 4th anterior rib, and a hypodense mass in the liver, consider new growth or metastasis. The aggressive behavior of the tumor prompted a repeat biopsy, revealing HCC primary, metastatic to the left chest. Further work up revealed an AFP of 400 IU/mL, negative hepatitis B surface antigen marker and an Immunohistochemical stain Hepatocyte Specific Antigen (HEP PAR-1) revealed positive focal, which confirmed the hepatocellular nature of the tumor.

In view of his poor general condition and the progressive disease, he is not a candidate for resection or transplant thus chemotherapy with Sorafenib, an oral multikinase inhibitor is warranted. However, the prognostic factors with extrahepatic metastasis remain unclear. He was offered palliative and best supportive care.
Nonalcoholic fatty liver disease (NAFLD) is becoming a major public health problem. NAFLD has been recognized as a hepatic manifestation of metabolic syndrome, associated with systemic diseases such as cardiovascular disease (CVD) and chronic kidney disease (CKD). In this study the presence of possible liver disease detected by biochemical parameters and confirmed by Transient Liver Elastography (TE) in a group of the patients with different aetiology of chronic kidney disease (CKD) was investigated. Patients with various stages of CKD were divided into the five subgroups in regards to aetiology. Liver stiffness was used to quantify liver fibrosis. Controlled attenuation parameter (CAP) was used to quantify liver steatosis. Functional liver tests and biochemical parameters of kidney function were measured to all the patients. Statistical analysis used in this study was a Decision tree as a predictive model to map observed variables resulting in the conclusion about outcomes. The application of existing laboratory’s parameters, in presence of the defined etiological factors of kidneys diseases, indicate on the development of hepatic diseases. Higher values of phosphorus and low values of feritin in patients with Autoimmune kidney disease, and Polycystic, expresses steatosis of the hepatic parenchyma. In contrary, low values of phosphorus and higher values of ferritin in patients with Nephroangiosclerosis, Diabetic nephropathy, and Glomerulonephritis and pyelonephritis, are in a favour steatosis of the hepatic parenchyma. Serum values of phosphorus and feritin are valuable predictors of the liver disease in patients with the terminal stage of kidney diseases of different aetiology.
Correlation Between NAFLD Fibrosis Score (NFS) and Carotid Intimal-Media Thickness (CIMT) in Non Alcoholic Fatty Liver Disease (NAFLD)

Hery Djagat Purnomo

Background: NAFLD Fibrosis Score (NFS) is one of non-invasive clinical method for predict liver fibrosis progression in NAFLD. Cardiovascular mortality is a major cause of NAFLD patients. Increased of carotid artery intimal media thickness (CIMT) is an early sign of subclinical atherosclerosis and predictors of cardiovascular risk. Study aim was analyze correlation of NFS with CIMT in NAFLD patients

Method: Cross sectional study in NAFLD outpatients clinic of tertiary hospital. The criteria of NFS based on clinical parameters, blood biochemistry and CIMT measurements use doppler ultrasound. Confounding variables were evaluated. Statistical analysis was performed

Results: There were 31 samples, 58.1% male, mean of age was 52.8 years old. Based on NFS, the largest distribution was 48.4% in intermediate probability, low and high probability advanced fibrosis same amount of 25.8% respectively. The mean increase of CIMT was found in intermediate and high group, with the highest average was found in the high group of 0.094 ± 0.017 cm. We found a weak correlation between NFS and CIMT, r = 0.363; p = 0.045. There was a significant difference in CIMT values among the NFS groups (p = 0.001), the difference was more pronounced with post-hoc test, low vs intermediate group (p = 0.001) and low vs high group (p = 0.002). There were significant correlation in logistic regression test between age and hypertension variables for CIMT in NAFLD.

Conclusion: There was a positive correlation between NFS and CIMT in NAFLD

<table>
<thead>
<tr>
<th>Variable</th>
<th>Overall (n=31)</th>
<th>Low Probability Advanced Fibrosis (n=8)</th>
<th>Intermediate Probability Advanced Fibrosis (n=15)</th>
<th>High Probability Advanced Fibrosis (n=8)</th>
<th>P value</th>
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<tr>
<td>Overweight</td>
<td>27 (87,1%)</td>
<td>7 (22,6%)</td>
<td>14 (45,2%)</td>
<td>6 (19,3%)</td>
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<td>Metabolic Syndrome</td>
<td>14 (45,2%)</td>
<td>2 (6,4%)</td>
<td>6 (19,3%)</td>
<td>6 (19,3%)</td>
<td>0,048*‡</td>
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<tr>
<td>CIMT Carotid</td>
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</tr>
<tr>
<td>CIMT Right Carotid (cm)</td>
<td>0,075 ± 0,022</td>
<td>0,053 ± 0,006</td>
<td>0,08 ± 0,022</td>
<td>0,085 ± 0,018</td>
<td>0,001*‡</td>
</tr>
<tr>
<td>CIMT Left Carotid (cm)</td>
<td>0,072 ± 0,026</td>
<td>0,055 ± 0,011</td>
<td>0,079 ± 0,030</td>
<td>0,076 ± 0,021</td>
<td>0,016*‡</td>
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<tr>
<td>CIMT Highest Carotid (cm)</td>
<td>0,083 ± 0,028</td>
<td>0,057 ± 0,011</td>
<td>0,091 ± 0,031</td>
<td>0,094 ± 0,017</td>
<td>0,001*‡</td>
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<td>Carotid Plaque</td>
<td>6 (19,4%)</td>
<td>1 (3,2%)</td>
<td>4 (12,9%)</td>
<td>1 (3,2%)</td>
<td>1,000†</td>
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test; §One Way Anova; ‡Kruskal Wallis Test; †Mann-Whitney Te" width="952" height="496" /
### Variables in the Equation

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<th>Variables in the Equation</th>
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<th>Sig.</th>
<th>Exp (B)</th>
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#### First Step

#### 5th Step

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<td>Hypertension</td>
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0.05) width="986" height="722" /
Background: Chronic HCV infection is the main cause of liver injury. It has been reported that hepatitis C virus (HCV) infection is associated with a low lipid profile. We aimed to evaluate the effect of antiviral treatment on the change of lipid profiles.

Methods: Total 863 patients who complete the interferon-based therapy in Kaohsiung Medical University Hospital were enrolled in this study. The serial lipid profiles were measured and evaluated in baseline and after 6 months of the treatment.

Results: Sustained virological response (SVR) was achieved in 81.2% of all patients. The baseline triglycerides (TG) levels in the SVR group and non-SVR groups were similar. The TG levels at 6 months after cessation of the treatment was significantly elevated in SVR group (102.9±57.0 mg/dL, p=0.0001) but not in non-SVR group (94.5±45.6 mg/dL, p=0.690) when compared to baseline TG levels. After adjusting patients by four indexes for fibrosis (FIB4) in cut-off point of 3.25, serum TG levels significantly increased in low FIB4 group (103.2±57.9 mg/dL, p=0.0001) but not in high FIB4 group (98.1±49.6 mg/dL, p=0.095) at 6 months after end of the treatment. Serum TG level was increased greater in patients who had lower FIB4 score and patients who achieved SVR (baseline 89.1±34.8 mg/dL; 6 months after treatment 104.3±59.3 mg/dL, paired T test p=0.0001).

Conclusion: The clearance of the HCV RNA is associated with the increase of lipids after anti HCV therapy. However advanced fibrosis also has an effect in increase of lipids after the treatment.
Screening for Risk Factors of NAFLD and ALD in Slovak Republic

Maria Szantova 1
3rd Department of Internal Medicine, Bratislava, Slovakia

**Background:** Noncommunicable diseases are estimated to account for 90% of total deaths and for 19% of premature deaths in Slovakia. Two major preventable risk factors of precocious mortality are: overweight/obesity and alcohol consumption.

**Aim:** Screening of risk factors related to nonalcoholic and alcoholic fatty liver disease (NAFLD & ALD) in Slovak liver outpatients and students.

**Methods:** A total group of 1385 persons aged 14-91 years were included: 923 patients (pts) and 462 students (sts). Self-managed anonymous questionnaires (Q) were filled in by them. Nine questions were included relating age, gender, education, weight and height, vegetable, fruit, fish and coffee intake, smoking and physical exercise.

**Results:** Overweight/obesity were detected in 59% pts/12% sts, insufficient fiber intake in 87% pts/93% sts, insufficient fish intake in 85% pts/sts, and insufficient physical exercise in 68% pts/74% sts. BMI over 25 together with risk alcohol consumption was present in 68% pts. Smoking was present in 19% pts/14% sts and insufficient coffee intake from its hepatoprotective point of view in 35% of pts. A total number of 75% pts/3.7% sts were at risk for NAFLD. In the group of students the risk of NAFLD was 3.75 times higher in boys compared to girls. Risk alcohol consumption was present in 33% of sts (42% of boys, 25% of girls) and in 64% of pts.

**Conclusions:** Anonymous Q is a useful screening tool for risk of NAFLD and ALD. Systematic national screening started from the school age should help detect patients with risk behavior and avoid precocious deaths.
Noninvasive Liver Fibrosis Screening in Patients with Nonalcoholic Fatty Liver Disease

Maria Szantova
3rd Department of Internal Medicine, Bratislava, Slovakia

Background: Screening of liver fibrosis is the most important point in the course of non-alcoholic fatty liver disease (NAFLD).

Aim of the work: Assess the degree of liver fibrosis by combination of noninvasive tools.

Methods and patients: In a group of 46 patients with NAFLD (aged 62±12) was liver fibrosis by transient elastography (TE), Fib-4 score (Fib-4), APRI index (APRI) and NAFLD fibrosis score (NFS) determined.

Results: The highest sensitivity in the estimation of mild and severe fibrosis was for TE and in the estimation of mild fibrosis for NFS and Fib-4. Metabolic risk factors were present more frequently in patients with significant fibrosis. Significant correlation between 1. the level of AST and fibrosis degree according to FIB-4, APRI; 2. glycemia and fibrosis degree according to TE, FIB-4, NFS; 3.age and fibrosis degree according to TE, Fib-4, NFS; 4. Platelets and fibrosis degree according to TE, Fib-4, APRI, NFS; 5. ALT and fibrosis degree according to APRI were found. Significant correlation between Fib-4 and TE, APRI and NFS were found.

Conclusion: From the used fibrosis scores Fib-4 had the highest degree of correlation with APRI and NFS. We suggest, that combination of Fib-4 with NFS is the best tool in the assessment of liver fibrosis. The determination of NIF will help to specify the prognostic stratification and individualize the patient treatment together with appraisal its effectivity.
Chronic Hepatitis C Treatment with Direct-Acting Antiviral agent, Complicated with Drug-Induced Liver Injury and Auto-Immune Liver Disease: Case Report

Ming-Rong Harn
Internal Medicine, Peikang, Taiwan

Introduction: Direct-acting antiviral agent (DAA) therapy can achieve a sustained anti-viral response; however, drug-induced liver injury (DILI) is a potential adverse drug reaction. We report a case of a female patient with chronic hepatitis C, complicated with DILI, further associated with auto-immune liver disease.

Case report: A 54-year-old female presented with chronic hepatitis C subtype 1b without cirrhosis; initiated DAA therapy with VELASOF (Sofosbuvir 400mg/Velpatasvir 100mg) daily on December 1st, 2017. Our patient showed a quick anti-viral response to the initial 2 weeks of DAA therapy but drug-induced liver injury was noted. While there was no detectable hepatitis C virus (HCV) RNA, GOT/GPT values rose from 125/291 to 227/480. DAA therapy was discontinued immediately. GOT/GPT levels gradually decreased to 96/185. However, follow-up blood testing on April 13th, 2018 showed a persistent level of elevated GOT/GPT at 90/163. Further anti-nuclear antibody (ANA) was tested positive (1:640), and auto-immune liver disease was diagnosed. Immuno-suppressant therapy was prescribed accordingly.

Discussion: While DAA therapy generally achieves a sustained anti-viral response in the treatment of chronic hepatitis C, close monitoring of liver function is advised. When patients are presented with drug-induced liver injury, DAA therapy should be discontinued immediately. Our patient, in particular, was further associated with auto-immune liver disease.
Impact of Weight Reduction on Fatty Liver Resolution in Normal Weight Non-Alcoholic Fatty Liver Disease Patients

Geum-Youn Gwak
Department of Medicine, South Korea

Background & Aims: For non-alcoholic fatty liver disease (NAFLD) patients with normal weight, whether weight reduction is beneficial for fatty liver resolution, and what is the optimal target of weight reduction are unclear. We investigated the impact of weight reduction on fatty liver resolution in lean NAFLD versus overweight/obese NAFLD.

Methods: We performed a retrospective cohort study of 18,417 adults with NAFLD at baseline who underwent repeated health check-up examinations from 2003 to 2013. NAFLD status was assessed by ultrasonography.

Results: During 68,882.85 person-years of follow-up (median follow-up of 2.99 years), 6,462 patients had fatty liver resolution. Compared to patients who had no weight reduction or increased weight, the fully-adjusted HR for fatty liver resolution in patients with 0~4.9%, 5~9.9% and ≥10% weight reduction were 1.69 (95% CI=1.59, 1.79), 3.38 (3.12, 3.65), and 5.31 (4.69, 6.01), respectively. When patients were subdivided into lean NAFLD and overweight/obese NAFLD groups, the magnitude of association between weight reduction and fatty liver resolution was stronger in overweight/obese NAFLD patients. However, the association between weight reduction and fatty liver resolution was also evident in lean NAFLD patients in a dose-dependent manner. In spline regression models, the association between weight change and the fatty liver resolution was linear among patients with normal weight.

Conclusion: In a large cohort of NAFLD patients, weight reduction showed a dose-dependent effect on fatty liver resolution in lean NAFLD as well as in overweight/obese NAFLD. Weight reduction is a fine target of lifestyle intervention in lean NAFLD patients.
Autoimmune hepatitis (AIH) is an immune-mediated liver disorder characterised by female preponderance, elevated transaminase and immunoglobulin G levels, seropositivity for autoantibodies and interface hepatitis in the presence of plasma cells and lymphocytic cells. Presentation is highly variable, therefore AIH should be considered during the diagnostic workup of any increased in liver enzyme levels. A plethora of clinical presentations can be seen ranging from chronic indolent disease to fulminant hepatitis, so corticosteroid therapy must be instututed early and modified in an individualized fashion. The aim of this study is to report the case of a 18 years old patient with a history of progressive jaundice associated with itching, abdominal discomfort and lethargy resulting from a chronic liver damage. It is emphasized that, the diagnosis of this disease becomes a challenge as in our case, given the fact that the definitive diagnoses is settled meld of clinical, laboratory and histological findings. On the otherside, it is essential to remember that the markers have low sensibility and specificity, and the liver biopsy is fundamental in establishing the diagnoses and treatment. In this case, besides laboratory markers liver biopsy was performed which confirmed the diagnosis of autoimmune hepatitis, and appropriate management of this disease relies on the use of immunosuppressants allowing its suitable control with minimal adverse effects.
Clinical Value of Endocan in Hepatosteatosis Severity Prediction

Hande Atalay

Department of Internal Medicine, ISTANBUL, Turkey

Background: Nonalcoholic fatty liver disease (NAFLD) is one of the most common chronic liver disease which is recently mentioned as an independent cardiovascular risk factor. Endocan is novel molecule of endothelial dysfunction. We aimed to evaluate the associations of serum endocan levels with the Hepatic steatosis index (HSI), Fatty liver index (FLI) and degrees of hepatosteatosis in patients with NAFLD.

Method: This is a cross-sectional study which includes 40 patients who had a diagnosis of NAFLD as noted by hepatic ultrasound method and 20 healthy controls. Secondary causes of fatty liver were excluded. FLI and HSI calculations were recorded. Serum endocan level obtained after an overnight fasting.

Results: The values of HSI and FLI were higher in the NAFLD groups than in the control groups (p<0.001). Five (12.5%) of 20 patients with liver steatosis had grade 1 liver steatosis, fifteen (37.5%) patients had grade 2 liver steatosis, and twenty (50.0%) patients had grade 3 liver steatosis. The serum endocan levels were lower in the NAFLD patients compared to the healthy controls (146.56±133.29 pg/mL versus 433.71±298.01 pg/mL, p = 0.001). ROC curve analysis suggested that the optimum endocan value cut off point for NAFLD is 122.583 pg/mL (sensitivity: 71.79%, specificity: 90%, PPV: 93.3%, NPV: 62.1%).

Conclusion: Serum endocan concentrations low in patients with NAFLD. HIS and FLI were higher in NAFLD patients however have no correlation endocan. Further large sample sized studies are needed to clarify the relation of endocan with NAFLD.
Spontaneous Bacterial Empyema Without Ascities, Conservative Treatment And Clinical Evolution: A Case Report

Gabriel Figueroa-Parra

Department of Internal Medicine, Monterrey, Nuevo Leon, Mexico

Introduction: Spontaneous bacterial empyema (SBE) is a pleuro-pulmonary complication in cirrhotic patients. Its defined as the infection of a preexistent hepatic hydrothorax.

Case Presentation: A former alcoholic 49-years old man presented with right pleuritic pain. He had a HR: 110/min, RR: 26/min, SO2 90%, BP: 118/72 mmHg and 36.8°C. On physical examination: jaundice, absent breath sounds and dullness to percussion on the inferior right hemithorax were found. Chest radiograph showed pleural effusion. A right thoracentesis was performed, fluid was compatibles with SBE (Table 1); culture was negative. Low-sodium diet, cefotaxime (2g IV tid), furosemide (40mg IV qd) and spironolactone (100mg qd) were started for 5 days. After clinical improvement, treatment was switched oral (levofloxacin 500mg qd) to complete 10 days in home and continue diuretics indefinitely. During follow-up 6 weeks later, significant radiographic improvement was observed until complete resolution 12 weeks later.

Discussion: SBE is diagnosed by evidence of 250 PMN/mm$^3$ with positive-culture or 500 PMN/mm$^3$ with negative-culture, and the absence of lung affection. Approximately 43-45% of patients with SBE didn’t have spontaneous bacterial peritonitis (SBP). In only 25-33% of the cases is possible to identify microorganism. Therapeutic options are extrapolated from SBP trials because there aren’t SBE trials. In-hospital mortality is 20-38%. Our patient was treated successfully in a conservative way, during follow-up we demonstrated his radiographic improvement until his total resolution.
Associations Between Lipid Profile and Holter Monitoring in Adolescents with Prehypertension or Mild Arterial Hypertension

Yulia Venevtseva
Medical Institute, Tula, Russia

Aim. The aim of the study was to obtain possible association between lipid profile and circadian heart rate (HR), heart rate variability (HRV) and systolic and diastolic blood pressure (BP) dynamics in adolescents.

Methods. 144 adolescents aged 16-18 yrs (mean (M±SD) 16.9±0.9 yrs) underwent ambulatory Holter monitoring (heart rate and BP) and standard lipid markers evaluation.

Results. Mean height was 179.0±5.6 cm, weight 81.3±14.4 kg, body mass index (BMI) 25.4±4.3 kg/m2. 11.8% were smokers, 18.1% had elevated total cholesterol (TC) or triglyceride (TG) level.

According monitoring results 13.9% of adolescents were «non-dippers», 66.0% «dippers» and 20.1% «over-dippers». No difference in BMI, TC and TG between groups was found: TC was 3.8; 4.0 and 4.3 mmol/L, TG - 0.97; 1.04 and 1.15 mmol/L, respectively. BP was 136/67; 138/69; 139/73 mm Hg in the day and 128/63; 122/56; 114/51 mm Hg in the night.

Correlation analysis revealed positive relation TC to mean HR in the night-time (r= 0.183) and negative to mean diastolic BP in the night (r = - 0.174) and normalized power of high frequency band both in the day and night-time. TG level negatively correlated to mean diastolic BP in the night (r= - 0.172) and value of night-time decline both systolic (r= - 0.177) and diastolic BP (r= - 0.219). No correlation exists between anthropometric parameters and lipid markers.

Conclusion. In adolescents having excessive weight and tendency to arterial hypertension TC correlated to HR, HRV and diastolic BP, whereas TG – only to BP dynamics.
Aliskiren, renin inhibitor, has been shown to exert cardioprotective, renoprotective and anti-atherosclerotic effects independent of its blood pressure (BP) lowering activity. Clinical use of aliskiren is limited, however, by short lifetime of this drug. Therefore, we aimed to determine the effect of nanoparticle-loaded aliskiren, with gradually realized drug, on BP and structural alterations of the heart and aorta developed due to hypertension.

12-week-old male SHRs were divided to the untreated group, group treated with powdered aliskiren or nanoparticle-loaded aliskiren (25mg/kg per day) and group treated with nanoparticles only for 3 weeks by gavage. BP was measured by tail-cuff plethysmography. Collagen and elastin contents were determined by picro-sirius red staining in both heart and aorta. Wall thickness (WT), inner diameter (ID) and cross sectional area (CSA) were determined in the aorta.

At the end of experiment, BP was lower in both powdered aliskiren and nanoparticle-loaded aliskiren groups with more pronounced effect in the second one. Moreover, nanoparticle-loaded aliskiren was able to decrease collagen content (by 11%) and CSA (by 25%) in comparison to the powdered aliskiren group, while it had no significant effect on the similar parameters in the heart. There were no significant changes in elastin content, WT and ID among aliskiren groups and control group. Polymeric nanoparticles, however, increased collagen and elastin contents and WT of the aorta.

In conclusion, nanoparticle-loaded aliskiren seems to be promising drug in large vessels protection, more suitable polymeric nanoparticles, however, are needed for better tissue protection.

Measurable for 120 years, hypertension rational Rx targets all disease risk factors with diet, lifestyle, supplements;

and if HBP persists above ~ 140/90 in adults, drugs. Are modern drugs better?..

ANALYSIS of Pubmed Trials/reviews.

50 published trials since 1977- too late to save Pres Roosevelt- show that thiazide (even Cochrane Review 2018) or reserpine (20 trials) is each as good/ better than a single modern drug; and a potassium -magnesium sparing combination eg amilozide (~30 trials) is better, at lower dose.

Experience with lowdose daily reserpine eg ~0.1mg plus a lowdose K+Mg sparing diuretic eg amilozide (1/4/d amiloride +HCTZ hydrochlorothiazide 55mg) up to ½ a day each - (even just 1/4 each three days a week may suffice) ie that most MHBP patients on it have well-controlled BP, heart, circulation and metabolism. Few require addition of a 4th eg dihydralazine or amlodipine to normalize BP.

These old proven safe effective drugs, with flat dose-response curves, do not have the common risks of more modern fashionable alpha/ACE/ beta/CCblockers..

CONCLUSIONS: Unlike A/B/C blockers, titrated lowdose reserpine+amilozide with motivated change in lifestyle and diet-weightloss is optimal antihypertensive therapy, improves metabolism, circulation and brain function, reduces heartrate, mortality, dementia and stroke, renal failure and osteoporosis; and rarely causes wheeze, cough, rash, swelling, prediabetes, fatigue, depression or dizziness compared to more modern drugs..

$Billion BigPharma and societies/ practitioners they fund, dare not publish a trial/review comparing the above 40year old triple drug regime with modern wannabe prime antihypertensives.

conflict of interests/sponsors: none
Objective: To assess the clinical and epidemiological characteristics of hypertensive patients over 65 years of age in a Mediterranean area according to their circadian blood pressure pattern.

Material And Methods: Epidemiological, observational, longitudinal, prospective and multicentre study of the care setting, carried out in the Valencia Community with a hypertensive population over 65 years of age (FAPRES Registry).

Results: Of the 1,028 hypertensive patients basally included, 1,003 patients (97.6%) completed the follow-up after a median of 803 (721-896) days. Of these patients, about 90% (923) underwent ambulatory blood pressure monitoring (ABPM), which was not validated in 7 of them due to technical problems, so the final sample amounted to 916 patients.

From our population, 250 (27.3%) presented a dipper pattern, 412 (45%) a non-dipper pattern and 254 (27.7%) a riser pattern.

When studying mortality and cardiovascular events during the years of follow-up in this group of patients, we did not find significant differences in terms of overall mortality, cardiovascular mortality and admissions due to coronary disease, heart failure and stroke. However, when analysing the time until the onset of one of these events or mortality, we observed that patients with a riser pattern had a higher risk of admission for heart failure with values close to statistical significance (p 0.053).

Conclusion: Hypertensive patients over 65 years of age in the Mediterranean area with a riser pattern in ambulatory blood pressure monitoring have a tendency to increase their admission due to heart failure.
Objective: To assess cerebral stroke income in the hypertensive Mediterranean population older than 65 years.

Material And Methods: Epidemiological, observational, longitudinal, prospective and multicentre study of the care setting, carried out in the Valencia Community with a hypertensive population over 65 years of age that went to the Health Centre or to a Hospital Unit of Hypertension (FAPRES Registry).

Results: Of the 1,028 hypertensive patients basally included, 1,003 patients (97.6%) completed the follow-up after a median of 803 (721-896) days, with the following results:
- Average age: 72.8 ± 5.8 years.
- Women: 52.5%.
- Years of average evolution of HBP: 10.9 ± 8.3 years.
- Cardiovascular factors: 63.2% sedentary lifestyle, diabetes 27.5%, dyslipidaemia 48.3%, smoking 9%, alcohol consumption 3.8%.

During follow-up, 4.4% of patients required hospital admission for stroke. These patients presented the following statistically significant differences:
- Higher frequency of cerebral stroke antecedents.
- More smoking and less physical exercise.
- Less diuretic treatment and more use of antiaggregation.

In the multivariate analysis, the factors associated with admission due to cerebral stroke were the presence of previous stroke and smoking, compared to the performance of physical exercise and the use of diuretics.

Conclusion: In hypertensive patients older than 65 years of age in the Mediterranean area, the history of cerebral stroke and smoking predispose to stroke admission. Against the realization of physical exercise and the use of diuretics are shown as protective factors.
Introduction  Anaphylaxis is a potentially life threatening allergic reaction. Adrenaline is the primary treatment. Underdiagnosis and undertreatment of anaphylaxis have been reported, possibly due to lack of a clear definition of anaphylaxis. Since 2005 the NIAID/FAAN criteria for anaphylaxis have been gaining ground internationally. These criteria have been validated for use in the emergency department.

Aims  To study adequacy of diagnosis and treatment of anaphylaxis, as defined by NIAID/FAAN criteria, in patients presenting in the emergency department.

Methods  A retrospective observational cohort study of all patients presenting with suspected allergy at the emergency department of a Dutch teaching hospital during a two year period. The diagnosis given by the attending physician was compared to the presence of anaphylaxis according to NIAID/FAAN criteria. Secondly, the administration of adrenaline was compared to presence of anaphylaxis according to NIAID/FAAN criteria.

Results  548 patients were included, 246 (44.9%) of whom met the NIAID/FAAN criteria for anaphylaxis. 141 (57.3%) of these 246 patients were not reported as being anaphylactic by the attending physician. 90 (36.6%) of these 246 patients did not receive adrenaline.

Conclusion  This study demonstrates that anaphylactic patients were not labeled as such in over half of the cases. More than one third of anaphylactic patients did not receive adrenaline. These results suggest that anaphylaxis continues to be underdiagnosed and undertreated in the emergency department.
Background: Anaphylaxis is a rare, acute, serious and potentially fatal systemic allergic reaction, and it can manifest in variety of presentation and severities. Atypical anaphylaxis reaction, biphasic, somehow was a rare. Biphasic anaphylaxis occurs less than 3% in adults, and occurs without any re-exposure to the trigger.

Case description: A 59 years old man came with chest paint 24 hours before admitted. Patient was diagnosed having late onset STEMI and Pneumonia. No history of drug allergy before. Patient then treated with ACS protocols, antibiotic and plan for having PCI. Shortly after introduce to levofloxacin, patient was having an anaphylactic shock and treated with adrenalin within minutes and given diphenhydramine and corticosteroid for maintenance. Shortly, condition become stabilized. About 30 minutes after, patient then having acute pulmonary oedema and treated promptly. About 18 hours later, the patient having 2nd anaphylactic reaction without any trigger. The 2nd anaphylactic reaction was less severe. After 72 hours periods of severe allergic reaction, patient was undergo PCI with special protocols and having a successful procedure. Patient then discharge on 10th day of hospitalization.

Discussion: Levofloxacin was the L-isomer of the ofloxacin and appears to be better tolerated for side effects. There was few reported cases of anaphylaxis due to Levofloxacin after it was marketed in 1993. Using corticosteroid on anaphylaxis somehow does not really effective in preventing biphasic reaction to occurs, its similar to result of some systematic review. This is a very rare but serious adverse reaction due to Levofloxacin.

Keyword: biphasic, anaphylaxis, levofloxacin
Introduction: Deep vein thrombosis (DVT) is ten times more prevalent in HIV/AIDS patients than the general population. HIV/AIDS has also been shown to be a hypercoagulable state which is worsened by conditions like malignancies, opportunistic infections, some auto-immune diseases and chemotherapeutic agents.

Methods: This was a cross sectional, descriptive study looking at all HIV/AIDS patients admitted to level one wards at DGMH without DVT.

Results: There were 17 patients with the majority being females (65%). Mean age was 40 years.

Table 1 Variables of those patients with HIV/AIDS and Deep Vein Thrombosis (DVT).
<table>
<thead>
<tr>
<th>Condition</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>On HAAR</td>
<td>6</td>
<td>35%</td>
</tr>
<tr>
<td>On Tuberculosis</td>
<td>8</td>
<td>47%</td>
</tr>
<tr>
<td>Improvement</td>
<td>16</td>
<td>94%</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>Discharged</td>
<td>17</td>
<td>100%</td>
</tr>
<tr>
<td>Attempted Suicide</td>
<td>2</td>
<td>12%</td>
</tr>
<tr>
<td>Cerebrovascular Accident</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>Gastronitis</td>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>Anaemia –</td>
<td>2</td>
<td>12%</td>
</tr>
<tr>
<td>Mean duration</td>
<td>14.1 days</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion**

Patients with HIV/AIDS and opportunistic infections, or other predisposing factors such as immobility are more likely to develop DVTs.
Zosteriform leishmaniasis: a Case Report.

Beatriz Coimbra
Medice, Brazil

Introduction
The cutaneous leishmaniasis (CL) is a common protozoal disease in Brazil that displays multiple clinical variants. So the purpose of this study was to report a rare zosteriform-like case in order to recommend that the CL be included as a differential diagnosis from others more common dermatologic diseases.

Case Report
A 64-y.o., male, white, fisherman, reports that 3 months ago appeared ulcerated lesions in thoracic region. Treatment for herpes zoster was ineffective. A skin biopsy showed granuloma and amastigote forms. The immunohistochemistry for research Leishmania antigens was positive and the Montenegro’s reaction was positive (7 mm). The patient received intramuscularly Glucantime 20mg/kg/day body weight daily for 20 days. The healing of the lesions occurred in three months.

Discussion
There are many different clinical presentations of CL. Usually the lesions are typical and present no diagnostic difficulties. However, there is a rare variant form linear or zosteriform presentation, with an unilateral dermatomal or zonal distribution, that do not cross the median line, that can be confused with herpes zoster, delaying the diagnosis.

Infection site on covered areas is associated with atypical clinical presentation due to anatomical and physiological variations.

Conclusions
It is necessary to include CL in the differential diagnosis of herpes zoster, especially in cases with a more prolonged evolution, in endemic areas. So the doctor must have the open mind because the atypical forms of CL can be confused with others more common dermatologic disease.
Adrenal Histoplasmosis Among Immunocompetent Patients in Bangladesh

Muhammad Rahim¹
Nephrology, Dhaka, Bangladesh

Background: Histoplasmosis is an uncommon disease in Bangladesh. Adrenal gland is a characteristic site of involvement by Histoplasma capsulatum infection. Our aims were to describe the socio-demographic characteristics, clinical presentation, laboratory investigations, treatment and outcome of adrenal histoplasmosis in Bangladesh.

Methods: This descriptive study included adrenal histoplasmosis cases, diagnosed and treated in different teaching hospitals of Dhaka, Bangladesh between 2014 and 2016. Patients’ socio-demographic characteristics, clinical presentation, laboratory parameters and treatment outcome were recorded.

Results: All six patients were male with a mean age of 56.2 years. Three were farmers, three were smoker and three were diabetic. None of them tested positive for antibody against human immunodeficiency virus. Fever (4), anorexia (6), weight loss (6), anemia (4), pigmentation (2), postural hypotension (2) and hepatosplenomegaly (2) were common features. All patients had bilateral suprarenal enlargement, as revealed by imaging. Diagnosis was confirmed by fine needle aspiration cytology from suprarenal gland(s). Two patients had partial adrenal insufficiency. Two patients were prescribed anti-tuberculosis drugs empirically before diagnosis of histoplasmosis. Treatment consisted of initial amphotericin B (three patients) and itraconazole (all six patients). One patient had relapse of histoplasmosis, who later expired in hospital, three patients recovered (up to variable duration of follow-up) and outcome of rest two patients were not known.

Conclusion: Though histoplasmosis is uncommon in Bangladesh, it is not impossible to have bilateral adrenal masses due to histoplasmosis, even in immunocompetent individuals. Physicians should be aware of the condition and histoplasmosis should be considered as a differential in appropriate clinical scenario.
Epidemiology of Cryptococcal meningoencephalitis at the Internal Medicine service at the Hospital de Clínicas of Paraguay from 2013-2017

Maria Gabriela Moreno
Internal Medicine, San Lorenzo, Central, Paraguay

Introduction: Cryptococcal meningoencephalitis is a disease usually associated with immunocompromise. Presents fever, headaches, abnormal mental status. Diagnosis is made by detection of encapsulated yeast in cerebrospinal fluid (CSF) using India ink, latex agglutination test and CSF cultures. The treatment is based on antifungal therapy. Indicators of poor prognosis are: pleocytosis, hypoglucorraquia, positive India ink and increased intracranial pressure. The aim of the study is to determine the clinical and epidemiological characteristics of Cryptococcal meningoencephalitis on patients of the Internal medicine Service at the Hospital de Clínicas. The lack of report of this cases may be a main reason for the difficult access to safe and effective antifungal therapy in our country.

Methods: cross-sectional study with analysis of retrospective data. Performed at the Internal medicine Service at the Hospital de Clínicas of Paraguay in patients diagnosed with Cryptococcal meningoencephalitis from 2013 to 2017.

Results: 11 patients where included, 72.7% male, average age 34.63 years. 54.5% HIV-infected patients, 9% glucocorticoid therapy, 9% alcohol abuse and 18.1% rheumatological disease. Clinical presentation 45.45% headache, 36.36% abnormal mental status. 18.1% with signs of cerebral edema. The CSF presented less than 20 leukocytes per mL in 54.5%, hypoglucorrachia in 100%, protein concentration elevated in 81.8%. Positive India ink in 90.9%. 90.9% of patients received Amphotericin B.

Conclusion: Patients with Cryptococcal meningoencephalitis are generally young adults, with associated immunocompromise, mostly HIV. Clinical presentation is variable and CSF study frequently shows pleocytosis, hypoglucorrachia and elevated proteins.
Cytomegalovirus-Associated Oesophageal Stricture as a Manifestation of the Immune Reconstitution Inflammatory Syndrome (IRIS)

Brett Mansfield¹,²
¹Department of Internal Medicine, South Africa
²Faculty of Health Sciences, South Africa

Cytomegalovirus (CMV) oesophagitis is well described in immunocompromised individuals, however, oesophageal stricture due to CMV is rare. CMV disease in the setting of the immune reconstitution inflammatory syndrome (IRIS) usually takes the form of an immune-recovery uveitis or retinitis.

We describe a young female patient with advanced HIV who developed progressive dysphagia during the months following initiation of antiretroviral therapy (ART).

She underwent a barium swallow which identified a distal oesophageal stricture.

Tissue specimens obtained from the stricture during the subsequent gastroscopy were sent for histopathological assessment.
CMV immunohistochemical stains subsequently highlighted the presence of multiple foci of cells showing strong, nuclear staining, confirming the presence of CMV infection. ZN and AB-PAS stains showed no acid-fast bacilli nor fungal elements, respectively.

The patient responded well to treatment which involved 14 days of intravenous ganciclovir and oesophageal dilatation.
An Interesting Case of a Listeria Monocytogenes Brain Abscess in an Immunocompromised Patient Mimicking Ischemic Stroke

Angeliki Tsifi

1st Department of Internal Medicine, Athens, Attica, Greece

Introduction: Listeria monocytogenes is a Gram-positive bacillus that infects immunocompromised persons, neonates, pregnant women and, occasionally, previously healthy individuals. Bacteremia and meningitis are the most common manifestations of listeriosis but focal infections such as endocarditis, arthritis and osteomyelitis may also occur. Listerial brain abscesses are particularly rare and require a prolonged antimicrobial therapy with or without surgical intervention.

Case Description: We present a 62-year-old female on corticosteroid treatment for three months due to a recent diagnosis of autoimmune hepatitis who suddenly developed right hemiparesis mimicking a stroke. The patient was admitted to our department for further management. A brain CT scan revealed an intracranial mass in the left hemisphere with surrounding edema resembling an abscess and an additional brain MRI, that was performed, corroborated the diagnosis (Fig.1).

Two consecutive blood cultures were positive for Listeria monocytogenes and the patient was commenced on intravenous ampicillin in combination with gentamicin at first. Intravenous dexamethasone and mannitol were added and after a neurosurgeon was consulted, a conservative treatment without surgical intervention was selected. The patient exhibited remarkable improvement. Regular CT and MRI scans showed considerable shrinkage of the abscess and eventually the patient was discharged on the lowest possible dosage of corticosteroids required for her diagnosis of autoimmune hepatitis and on oral amoxicillin-clavulanic acid with provenesid until her next MRI scan.

Discussion: In cases of a diagnosed brain abscess the physician should not rush to a surgical intervention, especially since a more conservative approach may yield the same results.

Fig.1: Brain MRI of admission
Prevalence of Electrolyte Imbalance in Adult with Dengue Haemorrhagic Fever

Irma Wahyuni

Internal Medicine, Pekanbaru, Riau, Indonesia

Background: Electrolyte abnormalities during infection was commonly found among hospitalized patient. For adult with dengue haemorrhagic fever, occurrence of electrolyte abnormalities can cause longer recovery and relates to prolonged hospitalization, and some cases lead to uncommon presentation of dengue infection.1

Objective: To determine the prevalence of electrolyte imbalance in adult with dengue haemorrhagic fever.

Method: A cross sectional study was conducted in patient over 18 years old at Awal Bros Pekanbaru Hospital who diagnosed with dengue infection from 2015 – 2017. Electrolyte analysis was conducted using automatic electrolyte analyzer. We evaluate hyponatremia (Na 135 mEq/L) and hypokalemia (K 3,5 mEq/L). Dengue haemorrhagic fever was diagnosed based on World Health Organization criteria. Data was analysed using SPSS ver. 20.

Results: We studied 127 patient who hospitalized due to dengue infection. Prevalence of electrolyte imbalance was 64,6%. There are 57,7% male and 73,2% woman who had electrolyte imbalance. The mean for Na was 133,15 meq/L and mean for K was 3,3 meq/L. No significant relation between electrolyte imbalance with gender (p=0,093), BMI (p=0,552), nausea and low intake (0,694), vomiting (p=0,405), and diarrhea (p=0,024).

Conclusion: High prevalence of electrolyte imbalance among patient was not related to any of risk factor identified in this study and it is higher than previous study.2,3,4 However, existence of electrolyte imbalance cause prolonged recovery and hospitalization. There is needs to increase awareness for electrolyte imbalance despite existence of the symptoms.

Keyword: dengue haemorrhagic fever, electrolyte imbalance, hyponatremia, hypokalemia
Disseminated Actinomycosis Caused by *Actinomyces Meyeri*

Gus Adi Gunawan Go  
*Infectious Disease, Brisbane, Queensland, Australia*

Actinomyces meyeri is part of the oral microflora, commonly found in people with poor dentition. It is a rare cause of infection in humans. Here we report on the 3rd known case in Australia of Actinomyces meyeri as of August 2017. Endogenous infection can mimic malignancy or tuberculous. The most important feature on imaging study that is characteristic of actinomycosis is progression through tissue planes.

A 55 years old male presented to our hospital with 1 month history of progressive left flank swelling associated with a dull constant ache. Constitutional symptoms included fatigue, night sweats, anorexia and 15 kg weight loss. On examination he has a tender left renal angle with fluctuant collection. He had poor dentition but no clear active infection. Imaging with CT chest, abdomen and pelvis showed a left psoas abscess with perinephric extension.

He was empirically treated with Piperacillin-Tazobactam 4.5g QID and he proceeded with percutaneous drainage insertion, which drained 500ml of pus. Microscopy revealed a gram positive bacilli with “Chinese letter morphology”. The clinical picture was consistent with actinomycosis and his antibiotic therapy was rationalized to benzylpenicillin. The specimen culture came back 10 days later with Actinomyces meyeri. He continued to improve and was discharged home to complete six weeks of IV therapy with a transitioned to oral amoxicillin completing a total duration of 6 months of therapy.

This case illustrates a rare chronic infection that can pose a challenge to diagnose, but is readily treatable with a prolonged course of antimicrobial therapy.
Upper respiratory tract infections (URTI) pose a management challenge in the Emergency Department (ED). We aimed to estimate its frequency and to describe the attention process in our primary level of health care.

Retrospective cohort with all patients admitted to ED of Hospital Italiano de Buenos Aires (HIBA) between January/2015 and December/2016, from secondary databases.

21,581 cases of URTI (as diagnosed at discharge) occurred during the study period. Prevalence was 12.01%(95%CI:11.86%-12.16%).

Median age was 43, 61.58% were females and 51.76% were affiliated to the institutional health care plan (PS). Regarding treatment at ED: 3.77%(814) received at least one drug and 18.16%(3919) or at least one diagnostic test.

Median of waiting time was 53.7 minutes, while median of attention time was 14.13 minutes; 12.92%(2789) had a new consult within the first 7-days. Associated with 7-days consult: PS affiliation OR 1.47(95%CI:1.35-1.61) and any diagnostics tests performed OR 2.08(95%CI1.88-2.31). Hospitalizations within 7-days occurred in 0.40%(86), associated with these, were age OR 1.03(95%CI1.02-1.05;p0.001), male OR 1.82(95%CI1.10-3.02;p0.001), X-ray OR 2.61(95%CI1.39-4.91;p0.001), and at least one diagnostics tests performed OR 4.28(95%CI2.43-7.55;p0.001).

URTI is frequent, new rational strategies are needed for its management.
From Skin Deep to Deep in Mind

Khang Ning Loo
Internal Medicine, Singapore

A 59 year-old man presented with 3-day history of multiple skin swelling associated with fever. He had glomerulonephritis and was started on prednisolone 60mg daily 6 weeks before presentation. On examination there were skin abscess over his left elbow, right buttock discharging pus and tender erythema over right medial thigh. Investigation showed leukocytosis with raised CRP. The X-ray of left elbow did not show bone involvement. Blood cultures were negative. Initial impression was multiple skin abscesses and we offered surgical drainage of abscesses but he opted for conservative management with IV antibiotics. MRI was done to assess the extent and showed multiple, subcutaneous abscesses of left elbow, right gluteal, right groin and intramuscular abscess in right gracilis muscle. CT thorax guided biopsy was done as CXR showed an incidental left upper lobe spiculated nodule. The left elbow abscess was aspirated for further microbiology study. The results of both lung nodule and skin aspiration showed Nocardia Otitidiscaviarum. MRI Brain was performed to look for dissemination and showed cerebral abscess in right frontal lobe. Antibiotic was switched to Co-trimoxazole and Imipenem with close monitoring of his creatinine. He then underwent surgical drainage of subcutaneous and intramuscular abscesses. Final sensitivity showed resistance to Imipenem, therefore Tigecycline+Linezolid were used. On discharge, he was given oral co-trimoxazole + moxifloxacin, aiming to complete 12 months therapy.
Splanchnic Vein Thrombosis in a Patient Seropositive for Borrelia Antigens.

Elena Reznik

Internal Medicine Department N2, Russia

Introduction: Splanchnic vein thrombosis represents a significant problem with high morbidity and mortality. The risk factors for splanchnic vein thrombosis include infections, but its relationship with borreliosis has not been studied.

Case report: A 34-year-old man with chronic helicobacter-associated gastritis and gallstones was hospitalized due to development during the last 11 days of epigastric pain and fever to 38.7°C after a picnic at the forest without a registered tick bite. The blood leukocytes were increased to 11.2*10^9/l, lymphocytes 70%, C-reactive protein 34.6mg/l, procalcitonin 0.195ng/ml. The multispiral computed tomography of the abdominal cavity revealed thrombosis of portal, lienalis and superior mesenteric veins. D-dimer was 1.98mcg/ml, antithrombin III 75%. JACK2V617F, oncological, rheumatic, thrombophilia markers, blood and urine cultures were negative. A high concentration of anti-Borrelia burgdorferi IgM 62.2U/ml and its increasing to 190U/ml in dynamics was revealed at the immunofluorescence assay. Anti-Borrelia IgM to OspA, p31 and OspC, p25 were detected at the immunoblotting assay. Anticoagulation, doxycycline, detoxification therapy reduced pain and normalized temperature and inflammation markers. Vein thrombosis was not detected at the control tomography after 2 weeks.

Conclusions: Despite that the combination of thrombosis and borreliosis is rare, it is necessary to screen for Borrelia antigens in patients with splanchnic vein thrombosis and fever.
Chikungunya Among Patients with Pre Existing Rheumatological Diseases a Series of Eight Cases

Muhammad Rahim
Nephrology, Dhaka, Bangladesh

Introduction: Chikungunya is an emerging infection in Bangladesh. In spite of being a self-limiting disease, patients may have protracted rheumatological course. Patients with pre-existing rheumatic conditions are more likely to suffer from prolonged joint symptoms. A series of chikungunya cases occurring among patients with various pre-existing rheumatic conditions is presented here.

Methods: Patients socio-demographic, clinical and laboratory data were recorded in case record forms. Patients were followed-up clinically and over phone as appropriate.

Results: Eight patients with different pre-existing rheumatological diagnoses (ankylosing spondylitis-1, fibromyalgia-2, gout/hyperuricaemia-3, rheumatoid arthritis-1, systemic lupus erythematosus-1) suffering from chikungunya were eligible for analysis. Six of them were male and two were female (both having fibromyalgia). Their age ranged from 29 to 61 years. All of them presented with fever and joint pain, one patient with fibromyalgia presented first with joint pain and later developed fever. Five patients had lymphopaenia, six had high erythrocyte sedimentation rate and high C-reactive protein. One patient was diagnosed by reverse transcriptase polymerase chain reaction (RT-PCR) for chikungunya and seven patients were diagnosed by immunoglobulin M (IgM) against chikungunya. Dengue was excluded in all patients. Treatment consisted of paracetamol along with pre-existing medications. Surprisingly, one patient with fibromyalgia completely recovered from pain during acute phase.

Conclusion: Chikungunya is a new entity in our clinical practice. We need to follow-up the cases specially for rheumatological courses and patients with pre-existing rheumatic conditions merit special attention in this regard.
Socio Demographic Clinical and Laboratory Characteristics of Chikungunya an Interim Analysis of a
Bangladeshi Cohort

Muhammad Rahim¹
Nephrology, Dhaka, Bangladesh

Introduction: Chikungunya is a rapidly spreading viral infection of global concern and in Bangladesh it is an
emerging infection. This study aimed to evaluate socio-demographic, clinical and laboratory characteristics
of chikungunya in selected group of Bangladeshi patients.

Methods: A multi-center cohort study was done including adult patients with chikungunya from July 1,
2017. Diagnosis of chikungunya was done by reverse transcriptase polymerase chain reaction (RT-PCR) (12)
or immunoglobulin M (IgM) against chikungunya (95).

Results: Total patients were 107 including 61 males. Mean age of the study participants was 35.6 (range 19-
84) years. Ninety three patients presented with fever and 14 patients (with history of recent fever)
presented due to articular symptoms. Most (93) patients were managed as out-patient basis while 14
patients required hospitalization. Common features were fever/history of fever, joint pain, rash and
lymphadenopathy Out of 93 patients who presented with fever, 79 (85%) had concomitant joint symptoms,
70 (75.3%) had persistent joint symptoms beyond febrile illness requiring paracetamol. Sixty three (67.2%)
patients had joint pain beyond 3 weeks (sub-acute phase) requiring paracetamol, non-steroidal anti-
inflammatory drugs (NSAIDs) or corticosteroids. Eleven patients had passed 3 months since symptom onset
(chronic phase) and only one had joint symptoms requiring hydroxy-chloroquine. There was no death.

Conclusion: As chikungunya is an emerging infection in Bangladesh, larger studies and randomized
controlled trials for management of prolonged joint symptoms are urged.
Strongyloidiasis is an intestinal infection caused by the parasite Strongyloides stercoralis. Even though this disease can be found all around the globe, it is more common in developing countries, due to its lower hygiene levels. In previously healthy patients, this parasite causes a mild infection, however, in immunocompromised patients, the helminthes can cause a hyper infection, a rare condition, with high mortality rates. A 33-year-old man, who was under 6 years of prednisone use for leprosy, presented to hospital with abdominal pain and weight loss. The duodenal biopsy revealed Strongyloides stercoralis larvae. Due to this diagnosis, the prednisone was suspended and Ivermectin was introduced. After five days of the new treatment, the patient presented with the appearing of erythematous skin lesions. He was diagnosed with leprosy reaction type 1, and the prednisone was reintroduced. The patient developed acute respiratory and liver failure and, after investigation with serological and endoscopic methods, was given the diagnosis of hyperinfection. Even though ivermectin and the intensive care at the ICU were in place, the patient eventually passed away. In this case report we recommend that prior any immunosuppressed treatment be initiated, all patients ought to receive the prophylaxis for intestinal parasites. More importantly, these diseases should be included as a potential diagnosis.
Infestations with schistosomes are referred to as ectopic when the eggs or the adult parasite is found outside the portal system. The diagnosis of genital schistosomiasis is rarely made unless microscopic evidence proves its presence. Undiagnosed genital schistosomiasis may result in secondary infertility following ovarian fibrosis or tubal occlusion, ectopic pregnancy, abortion, cervical lesions or the development of cervical cancer. It is estimated that around 6 to 27% female patients with intestinal schistosomiasis suffer from pathology induced by eggs sequestered somewhere in their genital organs.

We present a case of a 48 year old woman who presented with vaginal bleeding of one month duration. Hypogastric mass was noted six years prior to consultation with gradual enlargement over the years. Ultrasound of the whole abdomen revealed multiple uterine fibroids.

Total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed and histopathologic result revealed chronic cervicitis with nabothian cyst, intramural and submucous leiomyomata, and a schistosomal egg in the right ovary.

Given the histolopathologic findings of ectopic schistosomiasis, patient was given praziquantel.

Most cases of ectopic schistosomiasis are diagnosed from surgical specimens hence it is usually underdiagnosed. Prompt diagnosis and initiation of treatment can help avoid complications of schistosomiasis. It should be considered as a differential diagnosis in female patients presenting with nonspecific gynecologic complains especially for those residing in endemic regions.

With immediate treatment, one may reverse the initial damage and halt the potential complications of genital schistosomiasis.
Mosquitoes Borne Diseases in Pregnancy- Affecting Two Lives at a Time

Sankalp Shastri

internal medicine, jaipur, rajasthan, India

Mosquitoes have been a part of our eco system since hundreds of years – so have been the diseases associated with them, as they are one of the most common disease vectors causing infinite number of deaths worldwide – especially in the immuno-compromised state of pregnancy, affecting two lives at a time.

Diseases like ZIKA, Dengue, Chickengunya, yellow fever, malaria etc. can be life threatening in a pregnant woman. Circumstantial changes in climate world over, public health and international travel have heightened the population at risk world over.

Any pregnant women living in or travelled to an area which is endemic to a particular disease is always at risk for it. Familiarities with differentials clinical presentation and laboratory testing can help in early diagnosis, prompt treatment, prevention and counselling of infected females with prognosis and possible implications on pregnancies can be instrumental in pacifying fears and banish myths in patients consigns and securing best fetal and maternal outcome. We will hence enlighten about the various diseases transmitted by mosquitoes, their symptoms the illness present with, diagnosis, possible treatments and impact on pregnancy with prevention methods for better outcome.
Severe malaria is caused predominantly by Plasmodium Falciparum (Pf) infection, which involving and affecting many of vital organ systems, hence increasing morbidity and mortality rates. We present a case of 39 years old woman patient who presented to the Emergency Department of Anna Medika Hospital, Bekasi, West Java, Indonesia complaint a fever for seven days before admission. From the history taking, we revealed the history of visiting Flores, East Nusa Tenggara three weeks before admission. Staining of blood smears examination showed trophozoite, gametocyte, and schizont in accordance with Pf infection. On the 2nd day at the ward, the condition began to deteriorate, and suddenly our patient fell to the unconscious state, and then she was intubated and transferred to Intensive Care Unit. By doing a comprehensive assessment, our patient suffered from severe malaria falciparum with cerebral complication, Acute Respiratory Distress Syndrome (ARDS), jaundice and hepatic dysfunction, acute kidney injury, Disseminated Intravascular Coagulation (DIC), severe anemia and complicating by sepsis due to pneumonia. Regarding the diagnosis, artesunate was administered 150 mg intravenously in hour-0, hour-12, hour-24 respectively and continued 150 mg iv/day. Antibiotic was initiated with meropenem 3x1 g iv due to infection concomitantly with ventilator support and hemodialysis. After 12 days of artesunate administration, the condition improved, and chest x-ray evaluation was significantly better. One day after artesunate was stopped, blood smear examination was negative, and so on day +7, 14, 21, 28 after the drug cessation. Our patient was discharged from the hospital after six weeks since the admission.
Haematocrit Dynamics in a Cohort of Patients with Dengue Infection Admitted to a Tertiary Care Medical Centre, Sri Lanka

Nayomi Shermila Jayasinghe

Internal medicine, Sri Lanka

Background - Dengue is a mosquito borne disease caused by a flavi virus resulting in significant morbidity and mortality around the world. Disease pattern is constantly changing and having a good understanding about changing parameters of the disease is mandatory in clinical setting.

Methodology/ Findings: A retrospective descriptive study was carried out in all the patients admitted to specialized dengue unit at National Hospital of Sri Lanka from 1st October to 31st December 2017. 235 patients were evaluated with regards to haematocrit dynamics, physiological and demographic profile. Data collected from bed head ticket using a data extraction sheet. Data analysed using version 21 of SPSS software. Mean age was 30.6 +/- 13.9 years. Mean weight was 60.8 +/-13.8. Highest haematocrit value was 44.9 in dengue hemorrhagic fever group and it was observed in the morning of day 6 of the illness. Highest haematocrit value was 43 in dengue fever group and was noted in the evening of day 5 of illness. Association between mean highest haematocrit value in dengue fever group and dengue hemorrhagic fever group was statistically significant (p=0.001). Lowest mean platelet (32,700) and highest mean haematocrit (44.9) were both noted on day 6 morning.

Conclusion : Haematocrit can be used as a parameter to monitor and manage dengue hemorrhagic fever and dengue fever, especially in resource poor settings. Day 6 of the illness is critical and parameters should be monitored closely.
The Effect of Sago Worm (Rhynchophorus ferrugineus) Flour on Parasitemia Index and Hemoglobin Level of Wwiss Strain Mice Infected Malaria

**muchlis ahsan udji**

*internal medicine, dr. kariadi hospital, semarang, central java, Indonesia*

**Background:** Plasmodium infections cause hemolysis of red blood cells, decreasing erythropesis resulting increased parasitemia index and decreased hemoglobin levels. Sago worm flour contains protein: glycine, arginine, methionine as antioxidants that can affect in the parasitemia index and hemoglobin level of infected malaria mice.

**Objective:** Proves that sago worm flour decreases the parasitemia index and increases the hemoglobin level of infected malaria strain Swiss mice.

**Methods:** The post test only randomized control group design used 35 female strain Swiss mice. Consisting of 5 groups: control negatif K (−), control positif K (+), control positif K (+) add DHP (dihydroartemisinin piperquine, X1 : sago worm flour 534 mg/20 gBW only, X2: sago worm flour 534 mg/20 gBW add DHP antimalarial therapy. Statistical analysis using the Saphiro-wilk method, One way Anova, Kruskal-Walls.

**Result:** There was difference index of parasitemia between groups K (−), K (+), K (+) with DHP, X1, X2 with p values (p: 0.001). Parasitemia index in group X1 was lower than control group K (+). Hemoglobin levels between groups have difference (p: 0.026). Hemoglobin levels in treatment groups X1 were higher than control group K (+).

**Conclusion:** Sago worm flour decreases the parasitemia index and increases the hemoglobin level of Swiss strain Mice infected malaria.

**Keywords:** sago worm flour, parasitemia index, hemoglobin level.
Infective Endocarditis Secondary to Coronary Angiography: Case Report

Betul Erismis

*Internal Medicine, Istanbul, Turkey*

**Introduction:** Infective endocarditis (IE) is an infection of intracardiac structures. It could be presents with high fever, new or altered cardiac murmur, splenomegaly, Osler nodules, Janeway lesions, rost speckles on the ophthalmic examination, as well as the characteristic lesion is vegetation. We aimed to present a male patient who presented with fatigue, high fever and weight loss and thought that infective endocarditis secondary to coronary angiography.

**Case:** A 58-year-old male patient presented to clinic with complaints of weight loss, fatigue and fever. It was learned that coronary angiography was performed and 2 stents were inserted 6 months ago. Blood pressure was 110/80 mmHg, pulse 112/min, body temperature 38.4 °C. On the neck and in both axillary regions, the largest lymph node, approximately 1.5 cm in size was detected. The spleen was palpable and rales was heard in the lower areas of bilateral lungs, tachycardic and there was a 4/6 S3 gallop murmur could be heard in each area. Hemoglobin 8.5 g/dl, white blood cell count 5940/mm3, platelet count 184000/mm3, C reactive protein 9.92 mg/dl and sedimentation 74 mm/h. The patient was considered to have IE and empirical ampicillin-sulbactam intravenous (iv) treatment was started after the cultures were obtained. Transesophageal echocardiography was performed; 2x0.6 cm and 0.9x0.5 cm dimensions were found to be compatible with vegetation on aortic valve. The current treatment of the patient with streptococcus gordonii uremia in blood cultures was changed to ceftriaxone 1x2 gr iv, gentamycin 160 mg iv and rifampicin 300 mg capsules 1x2 gr oral. The cardiovascular surgeon’s department was consulted for the need for operation and was handed over to opere.

**Conclusion:** IE is a clinical condition that requires rapid diagnosis and effective and strong antibiotic treatment as well as the use of surgical treatment facilities from the time of diagnosis.
A Six-Year journey with Melioidosis : a Challenging Case From Bangladesh

Samira Rahat Afroze¹

Internal Medicine Department, Dhaka, Bangladesh

Melioidosis is an emerging infectious disease in Bangladesh. Although the causative organism *Burkholderia pseudomallei* had been detected in soil, till date only 33 cases have been reported. Due to insufficient alertness and untrained human resources, melioidosis is often misdiagnosed as tuberculosis, causes severe complications, even death.

A 37-year-old, diabetic male, presented to us with a history of recurrent cutaneous abscess for 5 years and features of acute spinal shock. Initial investigations showed sepsis, MRI of spine reported infective spondylitis in dorsal spine, paravertebral soft tissue swelling and right sided abscess formation. Blood culture and culture of pus from cutaneous abscess revealed growth of *B. pseudomallei*. It was assumed that spinal and paraspinal lesions were due to same organism.

With 3 weeks of single drug intensive therapy followed by 2 drug maintenance treatment, he improved clinically and by second month he walked with support. But a persistent and non radiating pain on his left chest became unbearable. Repeat MRI of spine showed extension of previous lesion into vertebra. There was a debate to start empirical Category 1 treatment as tuberculosis is endemic in Bangladesh. Culture of CT guided FNA from the paraspinal lesion revealed *B. pseudomallei*.

Intensive therapy was re-started, this time 16 weeks of 3 drug therapy followed by 3 drug maintenance therapy for 12 weeks. His symptoms subsided and follow up MRI spine showed late sequel changes of spondylo-discitis. Hence, he was declared cured and till date is well.

Such presentation is rare in melioidosis and this is the first case of neuro-melioidosis in Bangladesh.
Immune Reconstitution Inflammatory Syndrome (IRIS)- Why? When? What? and what next?

Sankalp Shastri
Internal Medicine, Jaipur, Rajasthan, India

The use of highly active antiretroviral therapy (HAART) has led to a substantial decrease in the frequency of opportunistic infections among HIV-infected individuals, along with a significant reduction in their mortality rate. However, a subgroup of HAART-treated patients will exhibit paradoxical deterioration in their clinical status, despite satisfactory control of viral replication and improvements in CD4 lymphocyte counts. This clinical deterioration is a result of an exuberant inflammatory response towards previously diagnosed or incubating opportunistic pathogens, as well as responses towards other as yet undefined antigens and results in IRIS which is both puzzling and frustrating for both clinicians and patients alike. The term "immune reconstitution inflammatory syndrome" (IRIS) describes a collection of inflammatory disorders associated with paradoxical worsening of preexisting infectious processes following the initiation of antiretroviral therapy (ART) in HIV-infected individuals. A variety of manifestations of IRIS have been described, most prominently including Mycobacterium avium complex lymphadenitis, paradoxical exacerbations of pulmonary and CNS Mycobacterium tuberculosis infection, paradoxical exacerbations of Cryptococcus neoformans meningitis and cytomegalovirus uveitis. Treatment for this disorder includes continuation of primary therapy against the offending pathogen in order to decrease the antigenic load, continuation of effective HAART, and judicious use of anti-inflammatory agents. Most IRIS is mild and will resolve over time with treatment of symptoms only, but severe IRIS may cause permanent disability or death.

In this article we discuss about the causes, burden, diagnosis, treatment, prevention of IRIS and take a glimpse into the future of what lies beyond IRIS.
Profile of Bacterial Infectious Disease and Antimicrobial Choices in an Urban Hospital at Maputo, Mozambique

Clotilde Nhatave\textsuperscript{1,3}

\textsuperscript{1}Maputo Central Hospital, Internal Medicine, Maputo, Maputo, Mozambique
\textsuperscript{3}Internal Medicine, Maputo, Maputo, Mozambique

Background: Mozambique faces a problem of unknown magnitude, with scarce information on antimicrobial resistance profiles. Additionally, the absence of antimicrobial stewardship programs favors an almost “anarchic” use of a limited armamentarium. We thus sought to understand the rational behind antibiotic prescriptions, empiric therapy, and usefulness of cultures in these settings.

Methods: We conducted a prospective observational study at Maputo Central Hospital, in the first trimester 2018, on adult inpatients admitted to medicine wards, to assess the profile of acute bacterial infections and treatment choices.

Results: 239 patients, 13% of all had at least one diagnosed acute bacterial infection. No indication recorded in 12.7%. Diagnosed infections: CAP (48), Meningitis (48), PN (43), Aspirative bronchopneumonia (41), Acute enteritis (38), UTI (17), Neurotoxoplasmosis (12), soft tissue infections (10), Sepsis (6), chronic enteritis (5). 72.3% HIV positive. 29(12.1%) died. 66.1% discharged. 1.3% turned to be tuberculosis. 26(10.9%) transferred due to poor prognosis. Mostly prescribed: Ceftriaxone (48.6%) Metronidazol (15.8%) Hemocultures ordered in few occasions although liquor cultures were frequent.

Conclusions: Clearly, due to difficulties typical to a poor setting including scarcity of antimicrobials, shortage of qualified human resources, lack of local stewardship antimicrobial programs, and limitation of laboratory capacity, empiric therapy will continue to be the main approach. Moreover, our findings suggest the need for continued education, accurate and updated hospital antimicrobial resistance algorithms for best clinical practices.
The Case of Infectious Mononucleosis without Infectious Findings

Betul Erismis\textsuperscript{1}

Internal Medicine, Istanbul, Turkey

Introduction: Epstein-Barr virus (EBV) is a double-stranded DNA virus. The most common clinical manifestations are fever, fatigue, sore throat, exudative tonsillitis and lymphadenopathy. We aimed to present a patient with infectious mononucleosis (EMN) who applied polyclinic only with constitutional symptoms like fatigue, without fever, tonsillitis and sore throat.

Case: A 25-year-old female patient was referred to our outpatient polyclinic due to an absolute lymphocyte count and an elevation in liver function tests. The patient had no known systemic disease, and no drug use history. On examination, submandibular lymphadenopathy was detected and Traube’s space was closed. In the laboratory tests, hemoglobin (Hb) 11.5g/dl, white blood cell count (WBC) 15020/mm\textsuperscript{3} (10580 lymphocytes, 1730 monocytes), platelet count 293000/mm\textsuperscript{3}, aspartate transaminase (AST) 141U/L, alanine transaminase (ALT) 155U/L, gamma-glutamyl transferase (GGT) 69U/L, lactate dehydrogenase (LDH) 549 U/L, alkaline phosphatase (ALP) 235U/L, total bilirubin 1.7mg/dL, direct bilirubin 0.92mg/dL, C reactive protein was found to be 0.3mg/dL. Serologic tests for EBV were requested, suspected of possible EBV infection upon detection of active monocytes in the peripheral blood smear. Abdominal ultrasonography was performed and no pathological findings were found. No other lymphadenopathy was found in the patient who underwent neck, abdomen, and thorax computerized tomography. Laboratory values without treatment of Hb 10.7g/dl, WBC 5240/mm\textsuperscript{3}, platelet count 335000/mm\textsuperscript{3}, AST 24U/L, ALT 16U/L, GGT 52U/L, ALP 203U/L, LDH 227U/L, total bilirubin 0.9mg/dL and direct bilirubin 0.32mg/dL were found in the follow-up of the patient with positive serology tests and EMV diagnosis.

Conclusion: In the presence of lymphocytosis without any findings suggesting the presence of infectious disease at the first stage, chronic lymphocytic leukemia or other malignant conditions can occur first. The absence of evidence of active infection, especially in young and transaminase elevated patients, should not remove us from EMN.
Infective Endocarditis Due to an Unusual Gram-Negative Organism

Jarrod Zamparini$^{1,2}$

$^1$Internal Medicine, Johannesburg, Gauteng, South Africa
$^2$Division of Infectious Diseases, Johannesburg, Gauteng, South Africa

**Introduction:** Gram-negative organisms account for 4% or less of culture-positive cases of infective endocarditis (IE). IE due to gram-negative organisms is divided into HACEK and non-HACEK organisms. The incidence of HACEK gram-negative IE has remained stable over time but the incidence of non-HACEK gram-negative IE has increased. We report a case of IE secondary to *Enterobacter cloacae*.

**Case:** A 52-year-old female patient presented with a four-day history of fever, dyspnoea and pedal oedema. Examination revealed a pansystolic murmur over the mitral area and an end-systolic murmur over the aortic area with peripheral features of aortic insufficiency. Blood cultured positive for *Enterobacter cloacae* sensitive to third-generation cephalosporins. Transoesophageal echocardiography showed mixed mitral valve disease (predominantly stenosis) and aortic valve regurgitation. A mass was noted in the left atrium contiguous with the aortic valve root.

**Discussion:** Forty-four cases of enterobacter endocarditis have been reported in the literature with a mortality rate of 37.2%; higher than the 18% in-hospital mortality noted in ICE-PCS. Non-HACEK gram-negative IE was previously linked to intravenous drug use however recent data showed that 57% of patients with non-HACEK gram-negative endocarditis had a hospital-acquired infection compared to 4% who reported IV drug use. Increased rates of non-HACEK gram-negative IE have been noted in elderly females; thought to be due to an age-related alteration in vaginal mucosa and higher rates of diabetes predisposing them to urinary tract infections. Meyers et al reported urinary tract infections as the source of native valve IE in 75% of patients over 70 years old.
Methicillin Resistant Staphylococcus Aureus Bacteraemia in Adults at Chris Hani Baragwanath Academic Hospital

Guillaume Holz
Internal Medicine, Johannesburg, Gauteng, South Africa

Introduction: The emergence of Methicillin Resistant Staphylococcus Aureus (MRSA) has led to poor patient outcomes and longer hospital stays. Initially described as a nosocomial infection, it has now led to the emergence of community acquired (CA) strains. This study aimed to describe the difference between CA and hospital acquired (HA) MRSA infections.

Methods: A retrospective study was conducted at Chris Hani Baragwanath Academic Hospital from 1 January 2013 to 31 December 2015. Cases were identified utilising the National Health Laboratory service. One-hundred adult patients met the inclusion criteria and were included in the study.

Results: Seventy-seven were HA, 5 cases were CA and 18 cases were healthcare associated (HCA). CA and HCA MRSA had the highest all-cause mortality compared to HA MRSA (61% vs. 53%, [p<0.05]). Forty-two of 43 cases in the surgical department were HA (97.7% vs. 2.3%), 4 of 5 cases of CA and all 18 cases of HCA were medical patients. Thirty-nine patients were admitted to the Intensive Care Unit. Fifty-seven patients were HIV positive, and 34 (60%) were on antiretroviral therapy. Soft tissue (26%) and catheter associated infections (21%) were the two common sources in HA patients. The Charlson Morbidity score was higher in CA/HCA group (3.82 vs. 5.96, [p<0.05]).

Conclusion: Rates of CA MRSA infections remains low in our setting compared to international data. Whilst HA MRSA is common in surgical patients, HCA MRSA make up the majority of cases in medical patients with co-morbidities and previous hospital exposure is an important determinant.
Leptospirosis is a worldwide disease with marked differences in incidence and epidemiological profile, according to the affected region. It is estimated that more than 500,000 cases of severe leptospirosis occur globally every year. The relevance of this zoonosis has raised the disease to World Health Organization’s vigilant care through the creation of the Leptospirosis Burden Epidemiology Reference Group. The present report consists on the case of a 17-year-old man presenting to the emergency department from a Brazilian hospital with headache, high fever and generalized myalgia, evolving with hypovolemic shock, acute renal failure, icteric syndrome and alveolar hemorrhage. Then, received support therapy on intensive care unit and presented good clinical evolution. The objective of this report is to highlight the importance of the early recognition of Weil’s Syndrome, which, despite a rare manifestation of leptospirosis, becomes less unusual when considering absolute numbers in developing countries, in addition to being the most severe form and present high mortality rates if no correct therapeutic measures.
Tuberculosis of the Breast: Diagnostic Approach and Treatment

Ana Coutinho

Medical Clinic, Rio de Janeiro, RJ, Brazil

Tuberculosis is an infectious and transmissible disease that primarily affects the lungs, although it may affect other organs and systems. In Brazil, the disease is a serious public health problem. Approximately 70,000 new cases are reported each year and around 4,500 deaths occur due to tuberculosis.

Breast is one of the less common locations for tuberculosis (TB) infection and the increasing prevalence of TB, mainly in underdeveloped countries such as Brazil, may lead to an increase of uncommon locations of TB manifestations. Breast tuberculosis is often difficult to differentiate from carcinoma or pyogenic abscess.

In this report, we described the diagnostic investigation and evolution of a woman with breast lesion for 2 months, associated to sepsis. The diagnosis of pulmonary TB in the case, after a long investigation, suggested the etiology of the breast lesion. Antituberculous therapy was given to the patient associated with topical care, leading to an important clinical improvement.

In conclusion, the diagnosis of breast TB is hard to be done because of the low accuracy of the methods and TB should be kept in mind in the differential diagnosis of breast masses, especially in endemic locations, as Rio de Janeiro, Brazil.
A Clinical Case Study of Extrapulmonary Tuberculosis: TB Peritonitis as Chronic Ascites With Scrofula

Galina Bogoslovskaya

Internal medicine, Polokwane, Limpopo, South Africa

A 27 year old female, HIV negative, was referred for evaluation of massive ascites with weight gain (6kg in 5 months). Primary she was worked up by private GP and found cancer marker CA 125 elevated. She was operated (60 days before presentation) by Gynecologist with the presumed diagnosis of ovarian malignancy which was not confirmed and peritoneal biopsy was done. Meantime to wait for the result of peritoneal biopsy she felt a painful swelling of her neck. On examination, the patient appeared wasted, with no respiratory distress. In the right cervical region a single, tender, fluctuant lymph node was noted, 4 × 3 cm, which has been aspirated with yellow liquid. Overlying skin was normal. There was massive ascites with no signs of peritonitis without lower extremity swelling. From non-healed low laparotomy scar was oozing of straw color fluid. Histological examination of peritoneal biopsy revealed numerous caseating epithelioid granulomas with multinucleated giant cells of the Langhans type. Ziehl–Neelsen stains failed to identify pathological microorganisms. The diagnosis tuberculous peritonitis and lymphadenitis has considered. The patient was prescribed standard antituberculous treatment. Two days after the administration of antituberculous treatment the general condition of the patient was improved. Culture of the ascitic fluid and the lymph node aspirate was positive for mycobacterium tuberculosis. Conclusion: Clinical diagnosis of peritoneal TB should be considered in a relatively young female with chronic ascites. Laparoscopy to obtain tissue samples may be the most direct and least-invasive approach for a diagnosis to avoid unnecessary extended surgery.
Clinical Implications of F-18 FDG PET/CT in Scrub Typhus

Joo-Hee Hwang

Department of Internal Medicine, Jeonju, South Korea

**Background:** Scrub typhus is an acute febrile illness caused by *Orientia tsutsugamushi*. The diagnosis of scrub typhus is based on the history of exposure, clinical features, and results of serologic testing. To date, the clinical value of fluorodeoxyglucose (FDG) positron emission tomography/computed tomography (PET/CT) in scrub typhus has not been completely investigated. Therefore, we carried out a prospective study to describe the FDG PET/CT findings and its clinical implications in scrub typhus patients.

**Methods:** Patients ≥18 years who were suspected of having scrub typhus with eschar were enrolled. Patients with malignancies were excluded. Clinical assessments, blood samples, and FDG PET/CT images were obtained at enrolment and 3 weeks later. Scrub typhus was confirmed by the indirect immunofluorescence assay.

**Results:** Nine patients were included. The median age of the patients was 67 years; 5 (55.5%) were male. All patients were presented with a skin rash and showed abnormal liver function test and accompanied by thrombocytopenia on admission. On the initial FDG PET/CT, the eschars showed markedly increased FDG uptake on PET imaging and were improved after the treatment. Generalized and symmetrical lymphadenopathy and splenomegaly with high FDG uptake were observed in all patients. On the follow-up FDG PET/CT after antibiotic therapy, FDG uptake and the sizes of eschar, lymph nodes, and spleen were markedly decreased.

**Conclusion:** This study is the first evaluation of FDG PET/CT in scrub typhus and shows its clinical usefulness. FDG PET/CT imaging of scrub typhus could provide useful information for early diagnosis and clinical response after treatments.
Clinical Characteristics and Antimicrobial Susceptibility Trends in Citrobacter Bacteremia: A 11-year Experience

Raeseok Lee
Division of Infectious Diseases, Department of Internal Medicine, College of Medicine, Seoul, South Korea

Background/purpose. Recently, four consecutive neonatal deaths within 80 minutes, resulting from a *Citrobacter freundii* bacteremia in an ICU, have attracted a great deal of public attention in Korea. The aim of this study was to investigate the clinical features in more detail, the prognostic factors and antimicrobial susceptibility trends in *Citrobacter* bacteremia.

Methods. We reviewed medical records of patients with *Citrobacter* bacteremia at two university-affiliated tertiary hospitals, from 2007 to 2017.

Result. A total of 119 patients with a median age of 73 (24~101) were identified. Eighty-seven (73.1%) cases were infected by *C. freundii* and 32 cases had non-*freundii* bacteremia. Polymicrobial bacteremia occurred in 40 (33.6%) cases. Community acquired infection was slightly predominant (63%). Intra-abdominal infection, including hepatobiliary and gastrointestinal (GI) tract, was the most common primary site of infection (76/119, 63.8%). Initial empiric antibiotics were appropriate in 89 (80.1%) of the 111 treated patients. The resistant rate of 3rd generation cephalosporins was significantly higher in nosocomial infection. However, there was no difference in the resistant rates between the early period (from 2007 to 2012) and late period (from 2013-2017). Overall mortality was 26.9% (32/119). Charlson comorbidity index (OR 1.602, CI 1.232-2.084, p=0.000), Pitt bacteremia score (OR 2.83, CI 0.699-11.459, p=0.019) and nosocomial acquisition (OR 1.886, CI 1.231-2.889, p=0.004) were significant risk factors in a multivariate analysis.

Conclusions. Hepatobiliary tract infection was the leading cause of *Citrobacter* bacteremia both in community and nosocomial infection. Nosocomial infection was one of the risk factors for mortality and obtaining high resistant organisms.
Molecular characteristics of uropathogenic *E. coli* strains in Korean diabetes mellitus patients

Seong Yeol Ryu  
*Department of Infectious diseases, Daegu, South Korea*

*Escherichia coli* (*E.coli*) is the most predominant organism of urinary tract infection (UTI). In diabetes mellitus (DM) patients, UTI showed increased frequency and severity. But it is not known about molecular characteristics associated DM. The study was performed on 133 *E.coli* isolates recovered from blood, urine specimens from patients with UTI who were diagnosed at tertiary hospital from February 2015 to May 2016. Phylogenetic group and 29 virulence factors were identified by multiplex PCR. We compared virulence factors and antimicrobial susceptibility according to DM and non-DM. The phylogenetic group analysis revealed that most of uropathogenic *E.coli* (UPEC) are group B2 and D. The significant difference of phylogenetic group between DM and non-DM was not observed. Among virulence factors, *papA*, *papG* and *papG* allele III were lesser in DM group. UPEC in DM showed lower presentation of adhesion related virulence factors. In our study, it showed some difference of virulence factors between DM and non-DM in UPEC. Adhesion related virulence factors highly associated with non-DM patients. We need persistent efforts finding the molecular aspect of UTI in DM.
<table>
<thead>
<tr>
<th>Adhesion</th>
<th>papA</th>
<th>61(73.5%)</th>
<th>27(54.0%)</th>
<th>0.021</th>
<th>Iron</th>
<th>fyuA</th>
<th>82(98.8%)</th>
<th>47(94.0%)</th>
<th>0.149</th>
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<tr>
<td>fimH</td>
<td>81(97.6%)</td>
<td>50(10.0%)</td>
<td>0.527</td>
<td>iutA</td>
<td>61(73.5%)</td>
<td>34(68.0%)</td>
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<td></td>
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<tr>
<td>nfaE</td>
<td>1(1.2%)</td>
<td>1(2.0%)</td>
<td>1.000</td>
<td>Toxin</td>
<td>hlyA</td>
<td>24(28.9%)</td>
<td>16(32.0%)</td>
<td>0.707</td>
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<tr>
<td>afa/draBC</td>
<td>11(13.3%)</td>
<td>2(4.0%)</td>
<td>0.130</td>
<td>cvaC</td>
<td>8(9.6%)</td>
<td>2(4.0%)</td>
<td>0.319</td>
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<td></td>
</tr>
<tr>
<td>papC</td>
<td>62(74.7%)</td>
<td>30(60.0%)</td>
<td>0.075</td>
<td>Protection</td>
<td>kpsMTIII</td>
<td>1(1.2%)</td>
<td>2(4.0%)</td>
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<tr>
<td>papG</td>
<td>62(74.7%)</td>
<td>29(58.0%)</td>
<td>0.045</td>
<td>traT</td>
<td>68(81.9%)</td>
<td>34(68.0%)</td>
<td>0.066</td>
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</tr>
<tr>
<td>papG alleleI</td>
<td>61(73.5%)</td>
<td>27(54.0%)</td>
<td>0.021</td>
<td>Other</td>
<td>PAI</td>
<td>65(78.3%)</td>
<td>34(68.0%)</td>
<td>0.187</td>
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</tr>
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</table>
Background: Malaria is a parasitic infection caused by Plasmodium falciparum and is one of the leading causes of morbidity and mortality worldwide. The common complications include renal failure (“black water fever”), cerebral malaria and lactic acidosis. We describe the first case of symmetrical peripheral gangrene (SPG) due to severe Plasmodium falciparum infection in South Africa.

Case: A 43-year-old woman presented with a one-week history of intermittent fevers, chills, headache, vomiting, loss of energy and visual disturbances. On examination, bilateral symmetrical gangrene of the toes was noted. The rapid malaria antigen test was positive for Plasmodium falciparum and the smear showed a parasite load of 7%. The patient improved clinically on intravenous artesunate and paracetamol and a repeat thick smear confirmed clearance of the parasite however, the SPG did not improve and surgical amputation was recommended.

Discussion: There are only 27 cases of SPG documented worldwide. SPG is defined as distal ischaemic gangrene involving two or more sites in the absence of large vessel obstruction or vasculitis. The pathogenesis is not well-elucidated however microvascular obstruction appears to lead to the development of gangrene. Apart from anti-malarials, treatment is surgical and there is no evidence to support the use of antiplatelet therapy and anticoagulants.

Conclusion: SPG is a rare complication of malaria and is associated with high rates of morbidity and mortality. Physicians should be watchful for this complication in patients who present with high parasitaemia.
The Time Course Analyses of the Most Stressful Symptoms in ICU Patients

Hisayo Horiuchi
Emergency Medicine, Kurashiki, Okayama, Japan

Introduction: Ideally, patients in the intensive care unit (ICU) should be comfortable at all times and assessment is required for relief of the patients’ self-reported symptoms. Pain, thirst, anxiety, dyspnea and poor sleep are known as the most stressful symptoms for ICU patients. However, it is not known the time dependent change of them.

Objective: We focused on five patient symptoms and assessed how they changed over ICU stay.

Methods: All consecutive patient admitted to our hospital were enrolled from February 2016 to December 2017. We included patients who were intubated over 24 hours, and the mental status with Richmond Agitation-Sedation Scale (RASS) of -1 or 0. Patients sustained traumatic brain injury or living with dementia were excluded. Primary outcome was patient symptoms (pain, thirst, anxiety, dyspnea and poor sleep) during intubation. We evaluate these symptoms every day using 0-10 numeric rating scale (NRS) and Richard Cambell Sleep Questionnaire. We described patient’s data as median (interquartile range).

Result
658 patients were included. Median age was 63 (IQR 40 to 75). Female sex was 372 (56.5%). Table1 presents the results of the median NRS of five symptoms. Among the five symptoms, Pain and Dyspnea were well controlled. The score of Thirst was consistently high same as sleep. Anxiety was increased after day 4.

Conclusion: It must be allowing the clinicians to the better consideration and management for the tracheal intubated patient to recognize the fluctuation of the most stressful

<table>
<thead>
<tr>
<th>Table 1: median score of five symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
</tr>
<tr>
<td>Sleep</td>
</tr>
<tr>
<td>Thirst</td>
</tr>
<tr>
<td>Dyspnea</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
</tbody>
</table>

symptoms.
Leptospirosis is a systemic infection with varying degree of clinical manifestations from mild to fatal disease. Clinical suspicion is very important to identify leptospirosis. A field worker patient was admitted to our clinic with emerging acute hepatitis and renal failure accompanying conjunctivitis, autoimmune hemolytic anemia, thrombocytopenia, pneumonia and epididymorchitis. During the follow-up the patient was transmitted to intensive care unit, and hemodialysis with plasma exchange was performed. Usually mild disease is treated in outpatient clinics because severe organ failure are experienced rarely. Alternative treatments such as plasma exchange and corticosteroids may also provide benefits especially in patients who were unresponsive to classical therapies. There are just few cases were reported about beneficial effects of plasma exchange, corticosteroids and intravenous immunoglobulin. That was the reason why we wanted to draw attention to early diagnosis and management of Leptospirosis. Such awareness of this disease will prevent probable catastrophic consequences of treatable fatal disease. Furthermore alternative treatments such as plasma exchange and corticosteroids may also provide benefits.
The Importance of Lipid Raft Proteins in Human Sepsis Raftlin 2 Can It Be a New Biomarker

Hilmi Erdem Sumbul

Internal Medicine, Adana, Turkey

Bacterial infections and sepsis are common problems in patients treated in intensive care unit. Raftlin is a protein that has an important role in lipid rafts, this study aimed to compare raftlin-2 microprotein blood levels in a healthy control group with a patient group with septicemia. Prospective, controlled study was conducted in tertiary intensive care unit of university hospital, and control group was selected from healthy adults. The number was 64 in the patient group and 74 in the control group. Blood samples were taken in the study group before the start of antibiotic therapy, without time loss for treatment. Serum samples collected for raftlin-2 microprotein levels were centrifuged then stored at -80 C and studied by micro-ELISA. There was no statistically significant difference between raftlin-2 protein and lactate levels between healthy group and septicemia patient group. P values were calculated as 0.350 for raftlin-2 and 0.007 for lactate. There was a statistically significant difference between the two groups for procalcitonin (p value 0.000), HDL (p value 0.0001), LDL (p value 0.0001), white blood group (p value 0.001) and ferritin (p value 0.0001). The level of raftlin-2 microprotein in our study was not significantly different between the patient and control groups. According to our findings measurement of raftlin-2 level is not an alternative to the diagnostic methods used in daily clinics for sepsis. Additional studies is needed to determine the benefits of measuring the raftlin-2 level in clinical use and in the experimental setting. We recommend exclusion of cases with autoimmune disease when clinical trials are repeated.
Malnutrition in Intensive Care Unit Patients is not Associated with Diabetes

Sakir Keskek

Internal Medicine, Adana, Turkey

Introduction: Malnutrition is highly prevalent among older patients with type 2 diabetes in a hospital or geriatric care setting and is an important predictor for longer hospital stays and poorer clinical outcomes. In this study we aimed to investigate the effect of diabetes on nutrition status of patients in internal medicine intensive care unit.

Methods: A total of 192 patients were enrolled in this retrospective study. The study group was comprised of 77 patients with diabetes and the control group was comprised of 115 patients without diabetes. Mini nutritional assessment (MNA), nutric score and the nutrition risk screening (NRS)-2002 results of the patients were compared.

Results: The groups were matched in terms of age and sex (68.6±13.4 vs. 71.6±14.6, p=0.091; female/male= 38/39 vs. 46/69, p=0.426). The APACHE II score of the groups were comparable (21.1±6.6 vs. 20.5±6.3, p=0.539). MNA, nutric score and NRS-2002 tests results were 8.0±3.1, 4.61±1.85 and 3.37±1.84, respectively in the study group while they were 7.1±3.2, 4.56±1.85 and 3.93±1.72, respectively in the control group. The differences were not statistically significant (p=0.068, p=0.869, p=0.075, respectively).

Conclusion: In this study we have found comparable nutritional scores in both of the groups. Concomitant diseases other than diabetes may have more effect on nutritional status of patients in intensive care units.
A formalized sedation protocol was introduced in the MICU of Changi General Hospital along with the ABCDEF bundle in April 2017. A comparative study was carried out to assess the uptake of the protocol and its effects on the components of the ABCDEF bundle. 20 consecutive patients were reviewed in 2018 and compared to 20 patients in 2016. Patient’s details were collected from ICU charts and electronic records for first 72 hours of ICU stay. Both groups were demographically similar with a similar median length of stay (LOS) and median time spent on mechanical ventilation (MV).

In the post-protocol group (G1) daily sedation breaks were noted in 16 patients (80%) by D2 compared to 70% in the pre-protocol group (G2). Daily spontaneous breathing trials were seen in 65% patients in G1 compared to 45% in G2. Benzodiazepine use was noted in 20% of patients in G1 compared to 55% in G2. All patients had pain and delirium assessments but the CAM-ICU tool was used only in 50% of patients in G2. 1 patient in each group received anti-delirium medication.

All patients were attended to by physiotherapists in both groups in G1 80% of patients were mobilized by D3 compared to 65% in G2. All patients’ families were updated on a daily basis compared to 60% in G2.

Conclusions – All components of the ABCDEF bundle showed improvements with the introduction of the protocol, though the reduction in benzodiazepine use was the only component that was found to be statistically significant.
A Severe Case of Acute Cholangitis in an 83-Year-Old Patient Requiring ICU Admission and Mechanical Ventilation

Angeliki Tsifi

ICU, Athens, Attica, Greece

Introduction: The obstruction of the bile flow due to choledocholithiasis can result in acute cholangitis. The latter usually manifests itself with jaundice, fever with chills and pain, also known as the Charcot triad, while a more severe expression of the disease includes hypotension and altered mental status. Urgent endoscopic decompression in combination with antimicrobial therapy and adequate resuscitation are necessary in order to avoid complications that may require ICU admission.

Case description: We present an 83-year-old female with gallstones, hypertension and chronic atrial fibrillation that was admitted to the hospital due to fever, jaundice and abdominal pain. She soon deteriorated, exhibiting altered mental status and hypotension. Antimicrobial treatment with intravenous piperacillin-tazobactam and gentamycin was commenced but since septic shock, hypoxemia and hypotension developed, the patient was intubated and admitted in the ICU. Due to her hemodynamic instability and her exhibiting atrial fibrillation with rapid ventricular response, she was commenced on vasopressors and on intravenous amiodarone and she eventually underwent biliary drainage the following day. The endoscopic sphincterotomy with stone extraction resulted in her hemodynamic stabilization. The blood cultures and the culture taken during the ERCP yielded E.coli and Enterococcus faecium respectively and the patient was put on intravenous ciprofloxacin. Although her extubation was delayed due to atelectasis, she was successfully transferred back to the surgery department for further management.

Discussion: In cases of acute cholangitis a rapid diagnosis followed by urgent endoscopic decompression may prevent a fatal outcome and even eliminate the necessity of an ICU admission.
An Interesting Case of Central Diabetes Insipidus in a 40-Year-Old Male

Angeliki Tsifi
1
1st Department of Internal Medicine, Athens, Attica, Greece

Introduction: Central diabetes insipidus is an uncommon disease. It can be either primary or secondary based on the existence or not of a lesion of the pituitary gland and hypothalamus notable on MRI. It can be caused by various medical conditions. Metastasis in the pituitary gland is rare, but it could be an early manifestation of cancer. The posterior lobe of the pituitary gland is more commonly affected in patients with metastatic cancer and it explains the initial presentation of central diabetes insipidus.

Case Description: We are presenting a 40-year-old male with sudden onset of polyuria and polydipsia. MRI of the brain showed two masses in the suprasellar region, one located in the left hemisphere and the other over the pituitary stalk right beside the optic chiasm. (Fig.1).

Furthermore, a CT scan of the chest showed a pulmonary infiltrate in the left superior lobe with ipsilateral mediastinal lymphadenopathy(Fig.2).

Due to the pathological findings of the lung it was decided to perform a bronchoscopy and the biopsy revealed a lung adenocarcinoma. The patient received radiotherapy on the pituitary gland and adjuvant chemotherapy without response to treatment and he died three-months later.

Discussion: In patients presenting with central diabetes insipidus, pituitary metastases should be considered in the differential diagnosis. Early detection of the symptoms in combination with advanced imaging techniques could indisputably accelerate the initiation of treatment and provide the patient with better survival options.
Utility of Neutrophil-Lymphocyte Ratio, Platelet Lymphocyte Ratio and Mean Platelet Volume as Diagnostic and Prognostic Marker in Liver Abscess - Indian Study

Dr. V.S. Srikanth
Internal Medicine, Kochi, Kerala, India

Introduction: The objective of our study is to evaluate the indicative potential of NLR, PLR, and MPV to be used as diagnostic and prognostic markers in patients with liver abscess.

Methods: We have conducted the present study by screening 2,08,486 patients who got admitted as inpatients during the period January 2013 - June 2017. The data collected were analyzed for NLR, PLR, MPV, and CRP. Control group of patients with no known comorbidities were taken to find the normal cut off value of NLR, PLR, and MPV. Inclusion criteria: Patients of all age groups with liver abscess USG/CT proven. Exclusion criteria: All cases other than liver abscess and other source of infection.

Result: Liver Abscess revealed male preponderance. The incidence of liver abscess was highest in coastal area Ernakulum 15 cases Alaphuza and Kottayam 13 cases. Study revealed, NLR (p – value 0.000) & PLR (p – value 0.001) were statistically significant when compared to CRP. As per ROC analysis, CRP is first and PLR and NLR stand next while comparing with the control group parameters. This indicates PLR is next best marker to CRP. MPV was statistically insignificant to be used as prognostic marker.

Conclusion: We conclude that NLR, PLR are better and cost effective predictors and prognostic marker of liver diseases as compared to CRP which is an expensive investigation. These ratios of NLR and PLR can be interpreted from a peripheral smear at the primary health care level in rural parts of the country where testing inflammatory markers like CRP are not available.
Clinical Profile of Hyponatremia in a Tertiary Care Center in India

Dr. Srikanth V.S
Internal Medicine, Kochi, Kerala, India

Objectives: The retrospective study is conducted on in-patients admitted in AIMS hospital with Hyponatremia and to understand the etiology & manifestations of Hyponatremia.

Methods: The study is conducted on 980 patients who got admitted grouped age & gender wise. They were categorized based on serum sodium level under 3 groups of Hyponatremia (Mild, Moderate and Severe). The data collected were analyzed for Clinical presentations, Severity of Hyponatremia in relation to sensorium, Etiology of Hyponatremia, Causes of SIADH, Drugs causing SIADH and Co-morbidities of Hyponatremia.

Results: Hyponatremia was observed predominantly in the age group 70yrs (37.3%), with male predisposition (63%). Altered sensorium is the most common presentation of hyponatremia. The number of patients with disorientation is more in the moderate hyponatremia (64%) compared to severe hyponatremia (20%). SIADH was observed as leading cause of Hyponatremia. Respiratory causes such as pneumonia, asthma, OAD were the predominant causes of SIADH, followed by Dilutional hyponatremia and Drug Induced Hyponatremia. Of the various types of carcinoma, Lung Cancer & genitourinary cancer were the main causes of SIADH. The infections associated with hyponatremia were UTI (68%), Chest Infection (15%) and Cellulitis (14%). Analysis of data related to Diabetes Mellitus revealed 42% population with hyponatremia had Diabetes Mellitus, of which 64% had peripheral neuropathy and 10% had complications like diabetic foot & necrotizing fasciitis.

Conclusion: This study summarizes the varied presentations of hyponatremia, its causes and co-morbidities which will provide better understanding of hyponatremia.

Also aid the physician in diagnosing the precise cause of hyponatremia and better patient management.
The Dose-Response Effect of Serum Uric Acid on Incident Metabolic Syndrome in Apparently Healthy Individuals

Cheng-Wei Liu\textsuperscript{1,2,3}

\textsuperscript{1}Department of Internal Medicine, Taipei, Taiwan
\textsuperscript{2}., Taipei, Taiwan
\textsuperscript{3}Cardiology Division of Cardiovascular Medical Center, New Taipei City, Taiwan

Background: Hyperuricemia (HUA) is reportedly associated with the prevalent metabolic syndrome (MetS), but limited evidence investigates the dose-response effect of serum uric acid (SUA) on incident MetS.

Material and methods: We used the database of the annual health exam with approximately twenty thousand every year at our hospital. We enrolled the individuals undergoing the exam for two consecutive years. The interest of study was new-onset MetS in the second year. MetS is based on the Taiwan criteria. Hyperuricemia is defined as a serum uric acid level of 7 mg/dl or more in men or 6 mg/dl or more in women.

Results: We enrolled 11,777 individuals older than 30 years old in 2015. We excluded 1,981 individuals with prevalent MetS and 3,087 individuals not undergoing the exam in 2016. Finally, the study population was 6,709 individuals with the mean age of 37.7 years old and without baseline MetS. The HUA group (n=1,847) was predominant male compared with the normouricemic group (n=4,762) (96.7% vs. 81.8%, P<0.001). The HUA group was older and had greater values of waist circumference, systolic and diastolic blood pressure, fasting glucose, lipid profile, creatinine, and alanine transaminase than the normouricemic group. The incidences of MetS were 10.8% and 4.4% in the HUA group and in the normouricemia group (P<0.001). SUA was independently associated with incident MetS after adjusting for all confounders (adjusted OR: 1.133, 1.033-1.241, P=0.008). Sensitivity analyses showed the consistent results when replacing waist circumference by body mass index.

Conclusion: SUA has the dose-response effects of the both prevalent and incident MetS.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta</th>
<th>Adjusted OR</th>
<th>95% CI</th>
<th>P</th>
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<tbody>
<tr>
<td>SUA mg/dl</td>
<td>0.125</td>
<td>1.133</td>
<td>1.033-1.241</td>
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<td>1.031</td>
<td>1.008-1.055</td>
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<tr>
<td>Male</td>
<td>-1.297</td>
<td>0.273</td>
<td>0.152-0.491</td>
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<td>BMI Kg/m\textsuperscript{2}</td>
<td>0.223</td>
<td>1.249</td>
<td>1.198-1.303</td>
<td>0.000</td>
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<tr>
<td>Systolic BP mm Hg</td>
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<td>1.016</td>
<td>1.001-1.032</td>
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<tr>
<td>Diastolic BP mm Hg</td>
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<td>1.021</td>
<td>1.003-1.040</td>
<td>0.021</td>
</tr>
<tr>
<td>Glucose mg/dl</td>
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<td>1.023</td>
<td>1.015-1.030</td>
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<tr>
<td>T.cholesterol mg/dl</td>
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<td>1.000</td>
<td>0.990-1.011</td>
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<tr>
<td>HDL-C mg/dl</td>
<td>-0.093</td>
<td>0.912</td>
<td>0.894-0.929</td>
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<tr>
<td>LDL-C mg/dl</td>
<td>0.005</td>
<td>1.005</td>
<td>0.995-1.016</td>
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<td>Triglyceride mg/dl</td>
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<td>1.006</td>
<td>1.004-1.008</td>
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<tr>
<td>Creatinine mg/dl</td>
<td>-0.086</td>
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<td>0.997-1.005</td>
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<td>Hemoglobin g/dl</td>
<td>0.019</td>
<td>1.019</td>
<td>0.917-1.134</td>
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Table 1. Each 1 mg/dl increment of SUA was independently associated with incident MetS.
Neutrophil-Lymphocyte Ratio, Platelet-Lymphocyte Ratio and Mean Platelet Volume as Immunity diagnostic biomarkers between Hepatocellular carcinoma and other rare liver diseases

Dr. V.S Srikanth
Internal Medicine, Kochi, Kerala, India

Introduction. Malignancy like Hepatocellular carcinoma, can present with varied levels of immunity levels. Which is difficult to differentiate with other rare liver conditions like Liver abscess, Cholangitic liver abscess, Liver Cirrhosis

Methods: We have conducted the present study by screening 2,08,486 patients during the year 2013 January-June 2017. The data collected were analyzed for Neutrophil-Lymphocyte Ratio, Platelet-Lymphocyte Ratio, Mean Platelet each group of Hepatocellular carcinomas, Liver Abscess, Cholangitic Liver abscess, Liver cirrhosis. Control group of with no known comorbidities were taken to find the normal cut off value of NLR, PLR and MPV and was validated with other similar studies

Results: Equal male and female preponderance was seen in Hepatocellular carcinoma but male predominance in other liver conditions. The incidence of hepatocellular carcinoma was more in the low socio-economic group where as other liver diseases were equally prevalent in all the socio-economic groups. Hepatocellular carcinoma was more in urban area where as other disorders were more common in costal area. NLR, MPV and PLR were highly significant with a p–value 0.001 to be used as immunity and diagnostic marker.

Conclusion. we conclude that NLR MPV and PLR are good and cost-effective immunity and differentiating biomarker in malignant condition. These ratios of NLR and PLR can be interpreted from a peripheral smear at the primary health care level in rural part of the developing country. This simple and cost effective test will reduce the financial burden and better patient care in early identification and monitoring the prognosis of diseases.
Background: Visceral leishmaniasis is caused by intracellular protozoa of the genus Leishmania and is transmitted by sandflies. It presents with hepatosplenomegaly and pancytopenia due to bone marrow infiltration and is a usual cause of fever of unknown origin.

De Quervain thyroiditis is a rare disease, usually following a viral infection. Common symptoms include neck pain and thyroid gland tenderness. Fever and malaise for up to 6 months may co-exist with a fluctuation in the thyroid hormone levels.

Case Report: We report the case of a 72-year-old male with hypertension and hyperlipidemia who was admitted to our department due to fever, pancytopenia, hepatosplenomegaly and renal failure. Positive rK39 ELISA testing and antileishmanial antibodies supported our diagnosis of visceral leishmaniasis. The patient received intravenous liposomal amphotericin B and his antibody titles decreased. He improved but his renal function never normalized, probably due to circulating autoantibodies related to the disease.

Three months later he was readmitted to our department with fever and malaise, followed by odynophagia. His physical examination revealed thyroid gland enlargement and his laboratory analyses showed elevated FT3, FT4 and decreased TSH. An ultrasound of the thyroid gland and a negative scanning with Tc supported our clinical diagnosis of De Quervain thyroiditis at the hyperthyroid phase. Oral corticosteroids were prescribed and the patient was referred to the endocrinologist.

Conclusion: There is no known relation between these diseases. The presence of an autoimmune mechanism both in the case of leishmaniasis-related renal failure and De Quervain thyroiditis, linking the two, merits further investigation.
**Phlegmasia Cerulea Dolens: Serious and Infrequent Pathology, When to Suspect it and How to Treat it Effectively**

**Emilse Carrizo¹**

*Clinica Medica, Ciudadela, Tres de Febrero, Buenos Aires, Argentina*

**Introduction:** Phlegmasia Cerulia Dolens (FCD) is a complication of Deep Venous Thrombosis (DVT). It’s a massive and complete thrombosis of the superficial and deep veins. It’s an infrequent and serious pathology. The evolution without the appropriate therapy is towards venous gangrene with the amputation of the committed member and/or death. Given the rarity of this pathology, there aren’t therapeutic recommendations based on evidence.

**Material and methods:** We present 4 cases that occurred in two general hospitals during 4 years. Two male and two female. Aged: 26, 54, 62, 81

**Results:** All cases consulted by characteristic signs of DVT, two with antecedents of previous episode in treatment with dicumarinics, three had active oncological disease (gastric, lung and breast cancer) one thrombophilia of uncertain origin. Two of the oncological cases, knew this antecedent, the third was diagnosed in the hospitalization during the thrombophilia’s search. All worsened with the initial anticoagulant treatment. Two of the patients underwent thrombectomy, with favorable evolution and discharge from hospital. The other two were treated with Heparin sodium in an infusion pump, one of them responded favorably and the other progressed to necrosis in need of amputation and death.

**Conclusions:** Early clinical diagnosis, characterized by intense limb pain, even with anticoagulant treatment, is essential. The FCD must be the first differential diagnosis in face of the progression of DVT. The aggressive and immediate venous unblocking must be initiated, of choice: thrombectomy and thromboaspiration. This behavior in our experience coinciding with the limited available literature was successful.


**Background:** Takayasu arteritis is a systemic large blood vessel inflammatory disease which commonly affects women within the reproductive age group. The inflammation may initially cause vessel wall thickening alternating with fibrosis, leading to stenosis and occlusion with/without significant ischemia in the later stages. Diagnosing arteritis can be challenging as the clinical presentation varies according to the degree of inflammation, the extent and the distribution of the involved blood vessel segment. Short-lived inflammatory episodes easily be mistaken for viral illness with arthalgia or myalgia.

**Case:** 27-year-old lady presented with hypertension and headache. She had no radio-radial or radio-femoral delay and no carotid or renal bruit. Later she developed constant left leg pain and inter-scapular pain with a raised ESR. CT aortogram showed mild wall thickening in the proximal descending aorta. Similar mild focal wall thickening was also noted in the abdominal aorta, just proximal to the left renal artery and also just proximal to the aortic bifurcation. The major branches of the aortic arch, abdominal aorta and the terminal aortic branches, heart and mediastinal great vessels, hepatic and portal vessels were normal.

**Discussion:** The Chapel Hill classification and American College of Rheumatology classification of vasculitis is based on the distribution and size of the affected vessels. In 2005, the Paediatric Rheumatology European Society (PRES) and the European League against Rheumatism (EULAR) incorporated both vessel size and organ manifestation in their classification.

**Conclusion:** Vasculitides have very non-specific presentations and resembling viral illness at first. However, the course and duration of illness may raise the concern of an underlying vasculitic disorder.
Does Insulin Resistance Lead to Ocular Problem?

Sakir Keskek¹

Internal Medicine, Adana, Turkey

**Background:** Insulin resistance plays an important role in development of diabetes, hypertension and obesity. As an important ocular problem intraocular pressure (IOP) is a significant cause of irreversible blindness worldwide. The high levels of IOP have been found to be associated with diabetes, hypertension and obesity. The aim of this study was to investigate the association between IOP and insulin resistance.

**Material and methods:** A total of 99 patients were enrolled in this cross-sectional study. The study group was comprised of 51 patients with insulin resistance and the control group was comprised of 48 healthy subjects. Ophthalmological examinations, including IOP were performed on each subject. Serum fasting glucose and insulin levels were measured. Insulin resistance was measured using homeostasis model assessment (HOMA-IR).

**Results:** The groups were matched in terms of age and sex (49.2±10.2 vs. 47.0±8.6, p=0.252; female/male= 32/19 vs. 27/21, p=0.516). Serum fasting glucose, insulin and HOMA-IR were 106.2±18.5, 14.5±3.5 and 3.7±0.9, respectively in the study group while they were 90.9±9.3, 8.1±3.7 and 1.8±0.8, respectively in the control group. The differences were statistically significant (p<0.001, respectively). The IOP level of patients with insulin resistance was higher than healthy subjects (16.7±3.7 vs. 14.0±3.1, p=0.002).

**Conclusion:** In this study we have reported high levels of IOP in patients with insulin resistance. The absorption of water and sodium increase in case of hyperinsulinemic conditions and lead to excessive production of aqueous humour and increase in the episcleral venous and ciliary arterial pressures. Patients with insulin resistance should be checked for high IOP.

Keywords: Insulin resistance, intraocular pressure
Sulfonylurea-Clarithromycin Drug Interactions Resulting in Refractory Hypoglycemia - Case Study

Yuyang Tan
Internal Medicine, Singapore

A 70-year-old Chinese lady was admitted with giddiness and was found to be hypoglycemia. She has a background history of end-stage renal failure, diabetes mellitus, ischemic heart disease and metastatic breast cancer. Her medications include amlodipine, aspirin, atorvastatin, glipizide, losartan and exemestane. She had been prescribed with clarithromycin 1 week prior to admission for respiratory tract infection.

While inpatient, she remained persistently hypoglycemic for 4 days, despite continuous infusion of a dextrose 10% drip, 11 doses of dextrose 50% and 4 doses of glucagon. 4 days after admission, her capillary blood glucose stabilised and she was eventually switched to linagliptin for glucose control. Her refractory hypoglycemia was attributed to drug interactions between clarithromycin and sulfonylurea.

In this case study, we report an important drug interaction that is under-recognised. Glipizide is well absorbed and 99% protein bound. It is metabolised in the liver by CYP2C9 into inactive metabolites and excreted mainly in the urine. Clarithromycin is readily absorbed and inhibits cytochrome CYP3A4. It is postulated that clarithromycin may have displaced glipizide from protein binding sites, increasing unbound glipizide, resulting in severe hypoglycemia.

Our patient is elderly and has impaired renal function, increasing her risk of renal dysfunction. This case underscores the importance of medication reconciliation to prevent adverse events and reports on a under-recognised drug interaction.
Initial Age and Survival Relation Among Operated Colorectal Cancer Patients

Yildiz Okuturlar³
Internal Medicine, Istanbul, Turkey

Background: Aging is one of the most common factors of diagnosis of colorectal cancer. This study examines the relationship between survival rate and the age at the time of diagnosis.

Materials and methods: Patients undergone colorectal operations between 2006 and 2016 were examined. Among these; 179 patients who were diagnosed with adenocarcinoma or signet ring cell carcinoma were included in the study.

Results: When we determine the survival by November 2017, we found out that 73 patients (40,8 %) died and the survival was examined as 2,09±1,60 (0,01-6,30) years. Among the people who died the mean age was 64,72±12,22 (29-87) years while the mean survival was 2,09±1,60 (0,01-6,30) years. The patients who were alive had the mean age of 60,13±11,65 (22-84) years. There was a statistically significant difference between two groups according to the average of age (p=0,012). When there is a comparison between the patients above/equal and below 65 years of age; the mean age was 72,33±5,57 years among the patients above/equal to 65 years and 40 patients who were dead had a 2,08±1,65 years of average life span while among the patients with the age below 65 years, the mean age was 53,28±8,6 years and the average life span among the patients who were dead was 2,10±1,57 years

Conclusion: Patients underwent operation for colorectal cancer who are above 65 years of age have lesser life expectancy. In the light of this study, we can conclude that older adults are more prone to die from colorectal cancer.
Prevalence of Dyslipidemias and Associated Factors Among Patients with Diabetes Mellitus in Botswana

Godfrey Rwegerera\textsuperscript{1,2}
\textsuperscript{1}Internal Medicine, Gaborone, Select a State/Province, Botswana
\textsuperscript{2}Medicine, Gaborone, Select a State/Province, Botswana

Background: Diabetes mellitus (DM) is associated with increased prevalence of lipid abnormalities contributing to high risk of morbidity and mortality due to cardiovascular disease (CVD).

Aims: To determine prevalence of dyslipidemias and associated among patients with DM

Materials and methods: Cross-sectional study conducted from July to October 2015 among 380 randomly selected DM patients in a tertiary clinic in Gaborone, Botswana. Lipid levels and HbA1c were categorized according to NCEP ATP III and ADA guidelines respectively. Logistic regression analysis was performed to determine association between lipid abnormalities with glycemic control and demographic/clinical variables. A p-value $0.05$ was considered statistically significant.

Results: Majority of our patients, $275/365$ (75.3%), had dyslipidemia. Only $92/357$ (25.8%) type 2 DM patients were on lipid lowering drugs. Low HDL-C was the most common form of dyslipidemia accounting for $199/326$ (61.0%). Elevated LDL-C was found in $172/325$ (52.9%). High TC was present in $78/358$ (21.8%) whereas hypertriglyceridemia was observed in $19/358$ (5.3%). There was no significant association between poor glycemic control (HbA1c $\geq 7\%$) to TC, LDL-C, TG or HDL-C. Female gender was significantly associated with high TC levels (p-value= 0.041). Number of documented diabetic complications (p-value=0.003) and Type 2 DM (p-value=0.007) were significantly associated with elevated LDL-C.

Conclusion: Low HDL-C and elevated LDL-C were the most predominant dyslipidemias. There is a need to be more aggressive in management of dyslipidemias among DM patients so as to prevent development of cardiovascular disease (CVD) complications.
A Novel and Effective Treatment of Osteoarthritis (OA) of Knees with Collagen Hydrolysate (CH) (Mobility).

Ronald Tan¹,²,³,⁴

¹Medicine, Hong Kong, Kowloon, Hong Kong
²Tan, Hong Kong, Kowloon, Hong Kong
³Medicine, Hong Kong, Kowloon, Hong Kong
⁴Medicine, Hong Kong, Kowloon, Hong Kong

The elderly with OA often have a lot of co-morbid conditions, while awaiting Total Knee Replacement (TKR) surgery and have to suffer pain, discomfort, restricted mobility while carrying on with their ADL. Collagen Hydrolysate (CH: a Bioactive Collagen Peptides [BCP’s][Mobility]) 10 grams supplement OD, may benefit such patients. BCP’s have been shown to stimulate articular cartilage formation in human studies.

212 Patients, all on a pay for service basis in a specialist clinic, were recruited: {Females 168, age 35-93; mean 68.05 years; BMI 15.8 - 36.2; mean 24.72); Males 44, age 35 - 91; mean 67.9 years; BMI 17 - 38.2; mean 25.4}) with OA knees, were placed on CH OD, and followed for 1 year and 4 months. The patients were allowed their own co-morbid medications and were also allowed to be on their own OA knee medications: NSAID’s +/- Pregabalin +/- Gabapentin +/- Tramadol, +/- osteoporosis medications. The patients were on CH, as a group, for a mean average of 4.2 months.

12 (5.66%) patients noticed improvement in their joint stiffness, pain and had increased mobility after 2-3 weeks use; 63 patients (29.72%) could half their medications after 11 weeks; 38 patients (17.92%) could take their pain medications on a PRN basis after 14 weeks on CH. In total, 113 (53.3%) patients benefitted by the use of CH. Only 2% experienced slight loose bowel movement on initial use of CH, which resolved with continued use. Three patients (1.42%) showed sequential MRI articular cartilage thickness improvement.
Paroxysmal Nocturnal Hemoglobinuria (PNH) originates from an acquired genetic defect/mutation in a multipotent hematopoietic stem cell or in a hematopoietic progenitor cell, that acquires properties similar to a stem cell in its ability to survive, expand, and self-renew. PNH can arise de novo or in the setting of an underlying bone marrow disorder such as aplastic anemia (AA), myelodysplastic syndrome (MDS), or primary myelofibrosis (PMF).

This case presentation documents the challenging diagnosis of PNH in the obstetric setting, in which a myriad of other possible causes for a hemolytic anemia could be considered. This case details a 25 year old female, para one gravida two, originally from Malawi, referred to an antenatal clinic with a presumed diagnosis of an aplastic anemia which was later confirmed to be PNH. The dilemma faced by both the patient and treating physicians centred mainly around the progression of the pregnancy and likely complications of continuing with the pregnancy. The patient’s initial consultation to the Internal medicine service was at fourteen weeks gestation. She delivered a healthy baby at 37 weeks and was discharged on Warfarin, anticipating an increased risk of thrombosis in the post partum period. She continues to require blood transfusions for her ongoing hemolysis. This case also contrasts the available treatment options in a low to middle income country such as South Africa in relation to an obstetric patient from a high income country.

Pericardial Effusion and Bilateral Peri-Renal Masses – Is There a Connection?

Ana Margarida Oliveira

Internal Medicine, Matosinhos, Porto, Portugal

Introduction: A pericardial effusion demands the immediate evaluation of its hemodynamic consequences and implies an interesting diagnostic reasoning in the search of its cause.

Clinical case: The authors present a case of an 88-year-old woman with a history of hypertensive and ischemic heart disease, New York Heart Association class II heart failure, paroxysmal atrial fibrillation and essential thrombocytosis (ET).

The patient was referred to the emergency department because of chest pain, worsening of the usual pattern of dyspnea, nocturnal paroxysmal dyspnea, productive cough and constitutional symptoms, going on for 2 months. Objectively, she had normal and stable tension profile, hepatojugular reflux and arrhythmic and hypophonic sounds on cardiac auscultation.

She had increased inflammatory markers and type 1 respiratory failure. Chest radiograph showed increased cardio-thoracic index. Echocardiogram detected moderate volume pericardial effusion, with no signs of cardiac tamponade, not accessible due to its posterior location. The most probable causes considered were neoplastic, namely leukemic transformation of ET; infectious, namely tuberculosis, or a connective tissue disease. Peripheral blood smear had no immature cells, sedimentation rate was 9mm/1st hour, anti-nuclear antibodies and HIV came both negative. Thoraco-abdomino-pelvic CT-scan showed a bilateral peri-renal soft tissue halo, extending to the renal pelvis causing bilateral hydronephrosis. This narrowed the differential diagnosis for renal lymphoma, IgG4-related disease and Erdheim-Chester disease. Peri-renal mass biopsy showed diffuse infiltration by foamy macrophages (CD68 positive), compatible with Erdheim-Chester disease.

Discussion: The correlation of anamnesis and radiology is fundamental for the differential diagnosis of pericardial effusion. It raised suspicion for less common entities in clinical practice. Erdheim-Chester disease is a rare entity with both renal and cardiovascular manifestations.
Patients with Deep Vein Thrombosis Hospitalized on Department of Angiology, Clinical Center University of Sarajevo in Ten Years Period (2007–2016)

Demir Bejtovic¹

Department of Angiology, Sarajevo, Federation of Bosnia and Herzegovina, Bosnia and Herzegovina

Every sixth patient hospitalized on our department in past ten years was treated for acute or subacute deep vein thrombosis (DVT).

Working hypothesis—DVT is more prevalent in women, mostly after age 50 and it is most commonly localized at the lower extremities.

Null hypothesis is opponent to the working hypothesis.

Retrospective study included 1192 patients treated for DVT in period of 2007–2016 on our department.

Results: Analysis of gender representation shows women are more represented with 619 or 51.93%, but there is no statistically significant difference (p<0.05) in gender representation in DVT, therefore there is balance. Hypothesis is tested by determining $\chi^2 (\chi^2 = 1.775, p = 0.183)$.

There is statistically extremely significant difference in presentation of DVT in patients older than 50 years in comparison to younger patients ($\chi^2 = 223.369, p = 0.001$). We tested hypothesis about DVT localization and proved there is statistically significant difference which confirms lower extremities as the most common localization of DVT in comparison to upper extremities and other (female: $\chi^2 = 468.253, p = 0.001$; male $\chi^2 = 411.568, p = 0.001$).

Malignancy is more often diagnosed underlying DVT in female (185) than in male patients (122), while number of rethrombosis was almost identical (female 95, male 90). Pulmonary embolism is more common in male (37:20) as well as heroin abuse (15:4). In both categories there were pathologically increased values of D–dimer above 0,55 mg/l (total 7,37, female 8,72, male 6,3) and fibrinogen above 3,8 mg/l (total 5,1, female 5,2, male 5,0).
Patient Absence Rates to the Outpatient Health Care System and its Associated Risk Factors in Argentina

Bruno Boietti

Internal medicine research unit, CABA, Buenos Aires, Argentina

Assessing patient absence rates to the outpatient health care system (OHCS) and identifying its associated factors is needed to improve efficiency through different strategies.

Retrospective cohort of all appointments to adult OHCS of Hospital Italiano de Buenos Aires (HIBA) between January 2015 and December 2016. Secondary database was used to collect information. We report absence rates and 95%CI. Associated factors were studied through generalized linear models (OR and 95%CI).

Out of 4839335 appointments, 2526549 were included. 651624 (25.79%) were for general practitioners (GP), 814998 (32.26%) for clinical specialists (CS) and 1059927 (41.95%) for surgical specialists (SS).

Global absence rate was 27.84% (703449, CI95% 27.79-27.90). Absence rates for GP were 25.53% (166349, CI95% 25.42-25.63); for CS: 27.78% (226391, CI95% 27.68-27.87) and for SS: 29.31% (310709, CI95% 29.23-29.4).

Associated factors were: hospitalization at the time of the appointment OR 5.208 (95%CI 4.917-5.516) p 0.001; another appointment at the same time OR 1.847 (95%CI 1.601-2.132) p 0.001; a first-time appointment OR 1.187 (95%CI 1.174-1.199) p 0.001; time-to-appointment (e/10-days) OR 1.042 (95%CI 1.041-1.143) p 0.002; male gender OR 0.874 (95%CI 0.865-0.884) p 0.001; age (in decades) OR 0.874 (95%CI 0.865-0.884) p

1 out of 3 patients miss their OHCS appointments; this is a relevant Public Health issue and should be managed accordingly.
INTRODUCTION: Venous thromboembolic disease (VTE) prognosis in elderly is unclear. Aim: to compare the survival of young and elderly.

METHODS: Prospective cohort of patients with VTE between 6/12 and 05/14. Groups: young (17-64 years) and elderly (65). Follow up was done by telephone and review of clinical history. Time to recurrence was estimated as competitive events in the context of death and major bleeding.

RESULTS: 446 patients, 55% women, 63% (292) were older than 65 years. Overall mortality was 37%, recurrence 7% and bleeding 9%. Survival was 99% at 30 days, 78% at 3 months, and 67% at two years. The elderly presented a risk of death 71% higher (HR c1.71, p 0.002) than the young, remaining at adjustemnt (HR a1.68, p 0.004.) Charlson greater than 2 (HRc 3.2 HRa 1.49) and active cancer (HRc 4 and HRa 3) associated with increased risk of death.

The overall recurrence was 5% at 30 days, 6% at 3 months and 13% (CI 9-18) at two years. When evaluating the time to global recurrence in the context of the competitive death event, there was no association with age and recurrence.

The bleeding occurred in 9% (39) of the patients. No differences were found between age groups.

CONCLUSIONS: Mortality from confirmed VTE is greater in the elderly than in the young. The Charlson score is a better predictor of outcome than age. There were no differences in relation to recurrence or bleeding, with age.
Background: Patients with diabetes have an earlier onset and increased severity of anemia compared to those with similar degree of renal impairment from other causes. Anemia is associated with an increased risk of vascular complications. In this study, we determined the prevalence of anemia in T2DM patients and its association with sociodemographic, clinical and laboratory parameters in an internal polyclinic hospital in Kupang, West Timor Indonesia.

Methods: This is a cross-sectional study data from January 2018 of 99 T2DM patients in polyclinic WZ Johannes Hospital. Data was analyzed using IBM SPSS Statistics version 23.0 for Windows.

Results: The prevalence of anemia was 51% and majority had normocytic normochromic (58.2%), mild (94%) anemia. Majority were Rote ethnic (32.7%), aged over 60 with comparable gender percentage (51%:49%) and long-standing, good-controlled DM [median fasting blood sugar (FBS) 106mg/dl; glycated hemoglobin (HbA1c) 5.3%]. Using the KDIGO chronic kidney disease (CKD) staging system, 38.8% of these patients were in stages 3-5. Anemic patients had a significantly higher serum creatinine, hypertension and estimated glomerular filtration rate (eGFR) compared to non-anemic patients. Anemic patients with diabetic nephropathy had a significantly lower hemoglobin (Hb) compared to those without this complication (p=0.014).

Conclusions: Anemia is already present in T2DM patients in WZ Johannes Hospital at initial presentation and is significantly associated with CKD. Hence, it emphasizes the obligatory need for routine and follow-up full blood count monitoring in T2DM patients in primary care to enable early detection and aggressive correction of anemia in preventing further complications.
HtLv 1 Associated to Micosis Fungoid CD4 CD8 Double Positive Unusual Variant of Cellular Lymphoma Tubes Report of a Case

MIGUEL ANGEL SANCHEZ MALPICA

LIMA, ATE VITARTE, LIMA, Peru

Mycosis fungoides is the most common cutaneous form of non-Hodgkin’s lymphoma with a prevalence of more than 50% and an incidence of 0.36 per 10,000 people. It is characterized by the fact that its cells exhibit a CD4- and CD8 + phenotype or a double-negative CD4 / CD8 phenotype, not being frequent its coexpression of CD4 and CD8, the causative agent is not entirely clear being controversial its association with the HTLV-1 virus with an incidence between 0% and close to 100%.

51-year-old male, sick time: 2 months with cervical lymphadenopathies of approximately 2 cm, not painful, soft, without changes of adjacent skin, of progressive evolution in size and in axillary and inguinal areas associated with maculo-papular erythematous confluent in dorsal area, 1/3 upper abdomen, arms and 30% facial area with edema without mucosal involvement.

Cervical ultrasound: right submaxillary adenopathy 20x12 mm, left sbmaxilla 19x12 mm; multiple bilateral cervical adenopathies, the largest in III right group of 26x13 mm, left 27x14 mm with loss of its cortico-medullary relationship.

Skin biopsy: dermal infiltrate by few atypical lymphocytes without epidermotropism with interstitial and perivascular infiltrate with immunohistochemical CD3 +, CD4 + (10%), CD8 + (80%), CD19-, CD20-, CD 45+, CD45R0 +, GRANZYMA: negative, PERFORIN : negative, TdT: negative.

The present case describes a male with HTLV-1 infection who presents a primary cutaneous lymphoma type mycosis fungoides with a phenotypic variety CD4 and CD8 both positive which turns out to be a little recognized variety.
Characterization of Internal Medicine Population in Macau´s Government Hospital – a five years reflective analysis (2013-2017)

Monica Pon

Internal Medicine, Macau

Objective: To typify the population of patients discharged from the Internal Medicine Department of Macau Public´s Hospital from January 2013 to December 2017.

Data source: The present data was collected from the Internal Medicine (demographic and clinical variables) database which includes age, gender and duration of stay, main diagnosis, comorbidities and hospital mortality.

Results: During these five years, 6656 patients were admitted, whereas most of them were transferred from the Emergency Department (91.9%). A slightly difference between males and females was found (50.5% vs 49.5%) whose mean age equaled 73 ± 18 years old (minimum 13 years old and maximum 109 years old). The mean duration of stay was 22 ± 13 days. The most prevalent main diagnosis was respiratory tract diseases (30.6%), mainly pneumonia followed by gastrointestinal diseases (15%), genitourinary tract infections (11.6%) and circulatory system diseases, such as congestive heart failure and ischemic heart disease (10.9%). The most common comorbidities were Diabetes and Cardiovascular Diseases, such as Hypertension. The hospital mortality rate was 13.4% and the two principal causes of death were cardiovascular diseases (16.3%) followed by neoplasia (11.1%).

Conclusion: The ageing of the population represents a substantial consumption in health and hospital resources. According to our data, the majority of patients are elderly with more related comorbidities and complications leading to a longer duration of hospitalization. Understanding our general Internal Medicine patients is essential for promoting a high-quality healthcare system including education on healthy ageing and investment in long-term care units to face the growing elderly population.
Evaluation of Relationship Between Chronic Myeloproliferative Diseases and Cardiovascular Risk Factors

Yildiz Okuturlar

Internal Medicine, Istanbul, Turkey

Aim: We aimed to evaluate the relationship between cardiovascular risk factors and Chronic myeloproliferative diseases (CMPD) in our study.

Materials and methods: In our study 120 BCR / ABL negative CMPD patient who applied to the hematology outpatient clinic was enrolled.

Results: CMPD patients enrolled to this study were classified as; 41.67% of patients (50 patients) were diagnosed with PV, 35.83% (43 patients) with ET and 2.50% (3 patients) with PMF and 20.00% (24 patients) unclassified. The frequency of JAK2 mutation was 46.8% in patients. The JAK2 mutation frequency was found to be 38.6% in PV, 43.1% in ET and 4.55% in PMF and 13.6% in unclassified CMPD. In our study, there were no statistically significant differences in disease group distributions between JAK 2 (+) and JAK 2 (-) groups.

In our study, in patients with and without JAK2 mutation, the presence of HT, ischemic heart disease has not been statistically shown to increase thrombosis risk. However, the history of smoking in the subgroup of patients with thrombosis; was found to be statistically significantly higher than the subgroup of patients without thrombosis.

There was no statistically significant difference between dyslipidemia and diabetes distributions, independent of thrombosis. Because the patient population is not yet sufficient for deep statistical analysis, no direct association between current risk factors and complications such as thrombosis has been made.

Conclusion: Considering the lifespan and morbidity of patients with CMPD, cardiovascular events can lead to serious complications and mortality.
A Rare Case of Bialtral Myxoma Presenting with Left sided Hemiparesis: Case Report

Barbara Jane Panopio
Internal Medicine, Tagum, Davao del Norte, Philippines

Malignant and benign cardiac tumors are rare type of tumors accounting for less than 0.2 % of all abnormal cell growth found in human. Myxoma accounts for 40-50% of all benign cardiac tumors and most of the cases are found in the left atrial cavity of middle-aged women. Cardiac myxomas arising from both chambers of the heart are even extremely rare.

We report a case of 19-year-old female with bialtral myxoma who presents with one week history of left sided hemiparesis associated with on and off headache. Associated sign of cardiac problem includes presence of bipedal edema of 1 week duration.

Two-dimensional echocardiography revealed a large ovoid mass measuring 4.7 cm x 3.7 cm almost occupying the whole left atrium and occluding the left ventricular inflow tract during diastole. The same echogenic mass occupied the right atrial cavity, measuring 5.1 cm x 3.7 cm and impedes the tricuspid valve opening during diastole.

The tumors were successfully removed and histologic analysis showed a gelatinous structure composed of stellated cells with abundant eosinophilic cytoplasm embedded in a myxoid stroma.

Systemic embolization caused by cardiac myxoma is frequent, often occurring in the cerebrovascular and retinal arteries, and less often in the pulmonary artery. Friable tumors usually present with embolization, while the larger myxomas often present with cardiac manifestations.

Among patients presenting with a neurologic deficit and without known risk factors, cardiac lesion should be ruled out. It is therefore of utmost importance to establish the correct diagnosis to avoid morbid complications.
A Case Report: Glucocorticoid Induced Diabetic Ketoacidosis in a Patient who Presented with a Flare of Systemic Lupus Erythematosus

Peter Anastasiades¹,²

¹Department of Internal Medicine, Pretoria, South Africa
²Department of Internal Medicine, Pretoria, South Africa

Glucocorticoid steroid induced diabetes mellitus (GSDM) is a well-known phenomenon that may occur in patients who use them for prolonged periods of time. The exact mechanism of the pathophysiology remain poorly understood.

Glucocorticoids form the back bone of the treatment of chronic autoimmune conditions, such as systemic lupus erythematosus (SLE), despite having multiple long term complications. Insulin resistance and steroid induced diabetes mellitus may occur after prolonged use of steroids. The incidence has been reported as being 1-53% and the prevalence remains largely unknown.

The following case report describes the development of GSDM with the initial presentation of a diabetic ketoacidosis. Prednisone was administered at 1mg/kg in a patient without a metabolic phenotype to treat a severe thrombocytopenia.

A twenty three year old nulliparous African female was admitted to hospital with a two month history of menorrhagia. On presentation she had grade II effort intolerance and complained of general body weakness, with no previous history of a bleeding diathesis. On examination she had sub-conjunctival haemorrhages, grade III pallor, a sinus tachycardia, no hepatosplenomegaly or palpable lymphadenopathy. Her full blood count revealed a bicytopenia with a haemoglobin of 4.3 g/dL and platelets of 1 x 10⁹/L.

Further work up confirmed the diagnosis of SLE with the patient meeting the following systemic lupus international collaborating clinics (SLICC) criteria, namely: anaemia, thrombocytopenia, 1g/24 hour proteinurea, positive ANA and low C3 & C4. She requires insulin therapy while receiving glucocorticosteroids and cyclophosphamide.
Evaluation of the Factors and Patterns Influencing the 30-day Readmission Rate at a Tertiary-level Hospital in Cape town, South Africa

Reinhardt Dreyer

Internal Medicine, Cape town, Western Cape, South Africa

Objective: The authors attempted to identify possible preventable and non-preventable factors contributing to 30-day readmissions after hospital discharge to Internal Medicine at TBH (Tygerberg Academic Hospital). The LACE-index was tested to evaluate the tool’s performance in their system.

The authors then reviewed readmission records to TBH for the study-period. Patients were divided into 2 groups – 1) related readmissions and 2) unrelated readmissions and the 2 groups compared with a randomly-selected control group.

Results: Most patients represented within the first 14 days (65%), confirming the relation to the primary event with evidence of admissions being related. The most important risk factor for predicting readmission, were the number of co-morbidities.

The study also identified a large burden of potentially avoidable causes (35% of readmissions) due to system-related issues, premature discharging being the most common amongst these. Nosocomial infection, ADR’s (adverse drug reactions), especially warfarin-toxicity, inadequate discharge planning and physician error in order of prevalence represented other important causes for 30-day readmission.

Conclusion: There were significant areas which could be improved on, with 35% of 30-day readmissions identified as being potentially avoidable. VTE’s was a small contributor to readmissions, but very high mortality.

A secondary outcome evaluated was the LACE- and modified-LACE-index in the TBH hospital environment. This risk stratification tool is used in various centres and correlates well with risk of 30-day readmission. Application of this tool performed statistically well in the TBH population and correlated with the risk of 30-day readmission (p0.001).
Denosumab for Treatment of Paget’s Disease in an Asian Lady with Renal Impairment

Navin Kuthiah

Internal Medicine, Singapore, Singapore, Singapore

Paget’s disease is caused by abnormal osteoclasts which lead to ineffective bone formation. The condition is very rare in the Asian population. Unrecognised and untreated disease can cause significant morbidity and reduced quality of life. The endocrine society published guidelines for management of Paget’s disease in 2014. The lack of randomised controlled trials has made development of clinical guidelines difficult. We describe a case of Paget’s disease in a 63 year old Singaporean Chinese woman with renal impairment who was referred for persistently elevated alkaline phosphatase levels. As the conventional bisphosphonates could not be used due to renal impairment, the patient was started on 6 monthly denosumab injections. She responded well to treatment.
WILD Syndrome: a Rare Presentation of Primary Lymphedema with Generalized Wart Diagnosed in Bangladesh

Sabrina Yesmin
Internal Medicine, Dhaka, Bangladesh, Bangladesh

WILD syndrome is a rare disease characterized by warts, impaired cell mediated immunity, primary lymphedema and anogenital dysplasia. Till date about four cases have been documented worldwide. Our patient who is a 13 year old boy presented with swelling of right lower limb since birth. The swelling gradually involved both upper limbs and right side of his face and grew to such an extent that he is unable to do his daily activities for the last 3 years. He is also having warty skin lesions over his whole body external genitalia and around the anus for the last 5 years. He has recurrent painless swelling of his abdomen with scanty micturition. On examination, he was mildly anemic, non-icteric, non-pitting edema of right leg, normal vital parameters, right sided pleural effusion, pericardial effusion and ascites, no organomegaly. Swelling and distortion of right lower limb with nodular lesions over the right leg, generalized hyper and hypopigmented verrucous papules and plaques over whole body, swelling of the glans and flat warts around the anus. His investigations reveals leucopenia, chylous pleural effusion, pericardial effusion, ascites, lymphatic obstruction of right lower limb with venous incompetency and normal arterial supply, reduced CD4 and CD8 T cell count, normal immunoglobulin levels, negative ICT for filaria. Histology of skin lesion reveals elephantiasis verrucosa nostra, and anogenital dysplasia with a large number of koilocytes, specific for HPV. P16 immunostaining overexpression correlates with oncogenic HPV infection is strongly positive in this case.
A Good Known, but not Involved in the First Line: Macroamilasemia

Betul Erismis

Internal Medicine, Istanbul, Turkey

**Introduction:** Amylase is a low molecular weight protein and is involved in the digestion of starch. Since the most common being in the salivary glands and pancreas, the blood levels reach very high levels in case of patholgy of these organs.

**Case:** A 56-year-old female patient with known HbsAg carrier applied to our internal medicine outpatient clinic. There was no drug, cigarette, alcohol, or any other substance that the patient was used to. On examination, vital findings and system examinations were all normal. In the laboratory tests, amylase was 1818 mg/dl, total cholesterol 270 mg/dl and LDL cholesterol 188 mg/dl when serum glucose, renal function tests, liver function tests, electrolyte values, thyroid function tests, lipase, hemogram and complete urine test results were within normal range. Control amylase assay was requested for a possible wrong result and the result was 1783 mg/dl. Abdominal ultrasonography was performed primarily to exclude possible intraabdominal pathologies and abdominal magnetic resonance examination was requested for further investigation. There was no pathology in both scans. In the absence of any complaints of the patient and no detailed pathology that could lead to amylase elevation, amylase and creatinine tests were requested in the patient with 24 hour urination considering macroamilazemia. Amylase/creatinine ratio was 1.5% and this result was interpreted in favor of macroamylase. The amylase levels of the patients remained high.

**Conclusion:** When a patient is diagnosed with macroamylase, the patient and their relatives should be informed about this result. Thus, unnecessary further examination and invasive procedures will be avoided.
In insulin resistance (IR) is the hallmark of Type 2 Diabetes (T2D), with visceral adipose tissue (VAT) dysfunction being a central feature. Also, the adipocyte size of subcutaneous adipose tissue (SAT) is related to IR. Assessment adipose tissue dysfunction is a challenge and can only be indirectly assessed by measuring circulating adipokines, such as adiponectin. $^{18}$F-fluorodeoxyglucose (FDG) is a widely used positron emission tomography (PET) tracer to assess metabolic activity of various tissues. We investigated the association between FDG-uptake in VAT and SAT in patients with T2D.

FDG-PET-CT scans were performed in 44 patients with early T2D (age 63 [54-66] years, BMI 30.4 [28-36], HbA1c (%) [6.3±0.4], HOMA-IR 5.1 [3.1-8.5]), without cardiovascular disease or glucose lowering medication. VAT and SAT volumes (cm$^3$) were quantified at L1-L5 with a semi-automatic method based on CT. FDG-uptake in these volumes was determined and expressed as mean Standardized Uptake Value (VAT-SUV$_{\text{mean}}$ and SAT-SUV$_{\text{mean}}$).

VAT-SUV$_{\text{mean}}$ was inversely associated with HOMA-IR ($r=-0.324$, $p=0.034$), Aspartate Amino Transferase (AST) ($r=-0.412$, $p=0.005$) and Alanine Amino Transferase (ALT) ($r=-0.422$, $p=0.004$). These associations were not observed with SAT-SUV$_{\text{mean}}$. VAT-SUV$_{\text{mean}}$ and SAT-SUV$_{\text{mean}}$ were positively correlated with adiponectin ($r=0.432$, $p=0.003$ and $r=0.368$, $p=0.014$, respectively). Both remained significant after correction for sex and HOMA-IR ($r=0.304$, $p=0.027$ and $r=0.414$, $p=0.017$, respectively).

FDG uptake in VAT is inversely associated with markers insulin resistance and NAFLD, positively with adiponectin and not with inflammation. This might implicate that a decreased FDG uptake is a proxy for visceral adipose tissue dysfunction.
Profile of Psychosomatic Disorders Patient In Internal Medicine

RATIH ARIANITA AGUNG

Division of Psychosomatic, Department of Internal Medicine of Cipto Mangunkusumo Hospital, Jakarta, Indonesia

Background: Psychosomatic medicine defined as a comprehensive, interdisciplinary framework for assessment of psychosocial factors affecting individual vulnerability, course and outcome of any type of disease; holistic consideration of patient care in clinical practice.

Objective: The aim was to examine certain characteristic of patients who suffer from psychosomatic disorders.

Methods: We called data through medical report outpatient clinic of Psychosomatic Division, Department of Internal Medicine, Cipto Mangunkusumo Central General Hospital of the University of Indonesia, Jakarta, Indonesia, during January 2016-December 2017. The descriptive analysis was performed to the objective the study.

Result: There were 276 subjects, 172 (62.31%) woman, 105 (37.29%) men. Java ethnic dominant (30.43%) than others. Mean age 49 years old. Patients occupation were housewife (40.94%), enterpreneur (11.23%), governement employees (4.34%), jobless (2.89%). Education background were highschool graduate (51.08%), bachelor (33.33%), not school (0.36%). Majority patient suffer from depression (50%), General Anxiety Disorder (20.65%), adusment disorder (10.86%), depression mix anxiety (5.76%), panic disorder (3.62%). Physical complain were dyspepsia (3.76%), myalgia (3.76%), chest pain (3.76%). Health condition was the majority precipitation factors, woman (20.65%), men (11.59%). The others are marriage problem: woman (9.42%), men (3.62%); economic problem: woman (8.69%), men (6.52%).

Conclusion: There were psychosomatic disorder in internal medicine patient, which the most physical symptoms was functional. We suggest screening psychosomatic disorders in internal medicine patient.

Keyword: internal medicine, psychosomatic disorder, depression, anxiety.
A Novel Type of Hereditary Angioedema with a Mutation in the Plasminogen Gene in Japan

Hiromasa Yakushiji
Department of Emergency Medicine, Osaka, Japan

Hereditary angioedema (HAE) is an autosomal dominant disease characterized by recurrent episodes of potentially life-threatening angioedema. HAE includes HAE due to C1 inhibitor (C1-INH) deficiency, and HAE with normal level and function of C1-INH in plasma (HAEnCI). HAEnCI is a novel type of HAE whose genetic background is heterogeneous. Mutations in the factor XII (F12) gene have been reported almost exclusively from Caucasians, while none from other races including Asians. Recently, a missense mutation K330E located in exon 9 of the plasminogen (PLG) gene was identified in German HAEnCI patients (HAE-PLG). We report a patient with HAE-PLG from Japan. The patient is a 97 years old female. She experienced the first attack of angioedema at the age of 94. Her tongue was swollen for 2 days, then gradually subsided in several days without any treatment. Her second attack occurred three months later. She had severe tongue swelling and airway obstruction. Intranasal intubation was performed using fiber scope. As in the previous attack, swelling of her tongue gradually improved with no treatment. She was extubated on day 3 of the disease and discharged on the 5th day. She was carrying a heterozygous missense mutation, p.Lys330Glu (K330E). Several of her family members experienced similar symptoms and had the same mutation. It is important to recognize that patients themselves have gene mutations that can cause angioedema, and it is necessary to consult a medical institution at an early stage when symptoms appear.
INTRODUCTION: Enormous health problems of humanity related to internal medicine (IM) depend also on odonopathology. Nutrition is a fundamental factor not only for animals, but also for human as “zoon politicon” (Aristoteles). Teeth pathology could cause dangerous diseases incl. acute/chronic sepsis leading to endocarditis, destruction of cardiac valves, nephritis, etc.

First report about philosophical odontology is given to World Congr. Philos. FISP-2013-Athens (Abstract Book p.766). Now problems in context of IM are to be considered.

A. On epistemology: Till today an effective conservative dental therapy (e.g. bacteriostatic and bacteriocide) compared with operative one is underdeveloped. Really prophylactic odontology depends on transformation of way of life leading to better total health supporting general-local immunity & tissue regeneration. Medical phenomenology (symptomatic-therapy) and ontology (causal/multifactorial therapy) need increased participation of IM-experts for treatment of caries dentium, pulpititis-periodontitis-gingivitis, granuloma (leading to acute-chronic sepsis), etc.

B. On ethics: Problems of odontological ethics are related to these of general & IM, school education (“Erziehung”), medical economics, etc. incl. human obligations (dentists-patients) acc.to I.KANT.

C. On aesthetics: Corrections of teeth-status incl. high quality of artificial teeth is a very expensive-affair. Support of conservative therapy (pharmaco-physical-etc.) could counteract this.

CONCLUSION: Political and financial support about systematic research in context of A.-C. could surely lead to better dental prophylaxis (a) and therapy (b), i.e. better general health, decrease of finances of dental treatment (c), help for developing countries (d) in accordance with UNO-Agenda 21 for better health, ecology, economy, etc. in all countries.
Assessment of Inappropriate Medication use in Jordanian Elderly Patients at Medical Ward by Beers 2015 Criteria

Nailya Bulatova\textsuperscript{1}

Biopharmaceutics and Clinical Pharmacy, Jordan

Background: An association exists between inappropriate prescribing in the elderly and poor clinical outcomes.

Aim: Using 2015 Beers criteria update, we aimed to assess the potentially inappropriate medications (PIMs) use among geriatric patients admitted to the internal medicine ward and to identify factors associated with inappropriate prescribing.

Methods: A cross sectional study that enrolled geriatric patients admitted to a teaching hospital. We studied PIM prevalence using 2015 Beers criteria. Factors that may affect PIM prescription were also assessed.

Results: Among 201 patients, the use of at least one PIM was identified in 37.8\% of elderly patients prior to admission, all of whom continued to receive PIMs during hospital stay. At least one PIM was identified in 56.8\% internal medicine ward patients. The most common PIM both prior to admission and during the hospital stay were proton pump inhibitors (93.4\% and 92.1\%, respectively). PIM prescription prior to admission was more frequent in patients who received a higher total number of drugs (P \textless 0.001) and had a higher Charlson co-morbidity index (P = 0.008). PIM during the hospital stay was also associated with a higher total number of prescribed drugs in the hospital (P = 0.001) as well as with being prescribed a PIM before the hospitalization (P = 0.005).

Conclusions: There is a high prevalence of PIM use among elderly patients in internal medicine ward, both prior to admission and during the hospital stay. Consistently with previous reports, polypharmacy was the main factor associated with PIM.
Introduction: The practice of palliative care began in Brazil’s 1980 in the midst of an essentially curative health care model. Since then it has been ascending, generating recognition of its practice on medical community. Although, despite inclusion of integral formation of the physician in curricular guidelines, there is a focus on technical-scientific learning, resulting in professionals who are distressed with termination of life.

Objective: To evaluate knowledge of medical students in the fifth and sixth years of a medical school in the highlands of Rio de Janeiro, Brazil, about palliative care.

Methodology: Interview structured from a script with seven questions, resulting in a qualitative-quantitative analysis of students’ knowledge.

Results: 86% of the students expressed their difficulty through superficial answers regarding the topic. In spite of this, 100% admitted that academic curriculum grid should improve with inclusion of palliation care subjects.

Discussion: Topics such as termination of life are gaining awareness, since there is a need to incorporate new skills on health professional’s training, in order to offer integral care to the patient. However, we realized that the participants did not know how to deal with this terminality, possibly due to high specificity of the discipline and insufficient preparation of educators.

Conclusion: Evaluating the growth of this issue and student’s eagerness to deepen their understanding, we emphasize the need for a constructive profile with a complete preparation for the health of the human being.

Clara Louise Vianna¹
Internal Medicine, Petropolis, Rio de Janeiro, Brazil

Background: Malignant aortic tumors are extremely rare; periaortic lymphomas have an even smaller prevalence among the population. Diffuse Large B-Cell Lymphomas (DLBCL) presenting as Aortic Pseudoaneurysm account for 10 cases reported worldwide. These have been associated with aortic aneurysms, vasculature erosion and complicated perivascular lymphoma.

Case Report: We report a case of a 79-year-old black male, former-smoker and a past medical history of hypertension, diabetes and severe peripheral arterial disease, being submitted to angioplasty with stent placement in the aorta and iliac arteries one year prior to admission in our unit. Clinical and radiological imaging were suggestive of a large aortic aneurysm and corrective surgery was performed. During the procedure, an aortic mass was found and the biopsy revealed a DLBCL. The patient subsequently died due to severe aortic bleeding and specific treatment could not be provided.

Discussion: It is expected that around 10,000 new cases of Non-Hodgkin Lymphomas will affect the population in our country this year (2018). There is no estimate of the percentage of these that will present as aortic masses; although its incidence is on the rise. When clinical and imaging studies provide insufficient information or clinical and radiological discordance exists, a biopsy with immunohistochemistry might provide better inside towards the correct diagnosis.

Conclusion: Although rare, Aortic Lymphomas must enter the myriad of diagnostic hypotheses even though they account for a smaller amount of aortic diseases. This atypical presentation causes a delay in the correct treatment and may impact long-term prognosis.
We describe an atypical presentation of thrombotic thrombocytopenic purpura (TTP) with a positive Coombs test.

A 79-year-old male presented with 6-month history of intermittent headache associated with dizziness and confusion, generalized weakness and cramping of both thighs on walking, past history of a similar episode 12 years prior, which needed plasma treatment. He is a long-standing smoker, currently on no medication, no contributory family history. Physical examination was remarkable for scant petechia on upper chest and shin.

Investigations revealed low platelets (20,000), anemia (HGB 9.4), hemolysis, normal creatinine, normal INR, elevated LDH (1,012), elevated D-Dimer (2,248 ng/mL), normal fibrinogen and slight schistocytes on peripheral smear (repeat smear showed 2-5 schistocytes), positive Coombs test. PT and aPTT were normal.

The patient’s TTP PLASMIC score was 6/7. However, the positive Coombs test is more suggestive of Evans Syndrome. He was treated with Rituximab, Prednisone, and repetitive sessions of plasma exchange continued once the TTP diagnosis was confirmed by ADAMT13 level 5%, and elevated ADAMTS13 inhibitor at 1.1 inhibitor units. The patient was discharged with a platelet count of 204 x10^3/uL and scheduled for outpatient follow-up. He has since received 5 plasma exchange sessions as outpatient.

This is a case of an atypical TTP presented with positive Coombs test that challenged early diagnosis of TTP—confusing it with Evans Syndrome (combined autoimmune thrombocytopenia and autoimmune hemolytic anemia with unknown etiology). We highlight the importance of high clinical suspicion of the life-threatening TTP in cases with thrombosis, anemia and evidence of hemolysis.
Case report: A Rare Reason for Epileptic Seizures: Fahr’s Disease

Ceren Gumusel
Internal Medicine, Istanbul, Turkey

INTRODUCTION: FD is a rare disease characterized by calcifications in the basal ganglia, cerebellum, dentate nucleus and centrum semiovale. Parkinsonism, seizures, dementia and psychiatric disorders could be seen. Here, we present a patient who had cerebrovascular disease, hypocalcemia in laboratory and calcifications in CT and diagnosed as FD.

CASE: A 78-year-old man had CVD and ischemic heart disease, presented with speech disorder and contraction on hands and face, had no surgery, smoking-alcohol history and used rivaroxaban, levotheriacetam, pyracetam. Total calcium level was 4.15 mg/dl, phosphorus 6.4 mg/dl, PTH 7.7 pg/ml, magnesium 1.9 mg/dl, CK 808 U/L, albumin 4 g/dl, 25-OH Vit D 12.7 ng/ml. Hormones, TFT, thyroid autoantibodies, syphilis tests, viral hepatitis markers, HSV serology, hemogram and other biochemical tests were normal. ECG was sinus. Calcifications were observed on CT in cerebellum, occipital lobes, basal ganglia and centrum semiovale. With symptoms, laboratory and imaging; FD was considered to be associated with hypocalcemia. IV calcium gluconate and oral 1-alpha-hydroxylated-vitamin D were given, serum calcium normalized.

CONCLUSION: FD occurs when calcium accumulates bilaterally symmetric in the strio-pallido-dentate region. Microvascular obliteration, perivascular-neuronal degeneration occur. There were no systemic disease/toxicity. Calcium, vitamin D and PTH levels were low and had no surgery or radiation in terms of hypoparathyroidism. The patient diagnosed as idiopathic hypoparathyroidism. FD has no definitive treatment. Calcium replacement could prevent the progression. In case, significant improvement was observed in symptoms and laboratory after replacement. Patients with neuropsychiatric symptoms, low calcium levels and bilateral calcification on CT, FD could be considered in diagnosis.
Case Report: 71-Year-Old Woman with Systemic Lupus Erythematosus

Ceren Gumusel

Internal Medicine, Istanbul, Turkey

Introduction: SLE is chronic, autoimmune, multisystemic disease with unknown etiology and variable clinical and laboratory findings and often diagnosed with age 15-40. The definition of elderly-onset lupus is used for patients diagnosed after age 50. The most common findings are fever, arthritis and serositis. Here, we presented 71-year-old female patient with SLE.

Case: A 71-year-old woman who have hypertension and type 2 DM was admitted to cardiology with swelling and weakness in legs. Coronary angiography was performed and medical treatment was given considering heart failure. The patient admitted to the emergency department with same complaints. There was +++/++++ pitting pretibial edema, other examinations were normal. Hb was 8.7 g/dl, wbc 3410/mm3 plt 56/mm3, erythrocyte sedimentation rate 126 mm/1 hour, urea 109 mg/dl, creatinine 1.24 mg/dl, total protein 6 g/dl, albumin 2.2 g/dl, electrolytes and liver enzymes were normal. In urinalysis, erythrocyte(++) , leucocyte(++++), albumin(+++), in 24-hour urine 7.5 g/day proteinuria were detected. Peripheral blood smear and protein-immunofixation electrophoresis were normal. ANA(1/2560), ANTI SM were positive, ANTI dsDNA was negative. Renal biopsy was performed and endocapillary proliferation, basement membrane thickening, glomerular neutrophil infiltration were found, consistent with stage 4 lupus nephritis.1 g/day pulse steroid for 3 days, then 500 mg cyclophosphamide and hydroxychloroquine were given. 0.5 mg/kg prednisolone was started. The complaints resolved and discharged with recommendation of policlinic control.

Conclusion: SLE is often seen in young women of childbearing age and usually diagnosed with age15-40. Lupus could be elderly-onset, confronted with different clinical findings and should be considered for differential diagnosis.
Can secondary prostate cancer foci spread to other sites? A Case Report and Review of the Literature.

Clara Louise Vianna

Internal Medicine, Petropolis, Rio de Janeiro, Brazil

**Background:** Prostate cancer (PC) is the second most common neoplasm among men in Brazil, with 20% of them diagnosed at an advanced stage or progressing to it. Bone and regional lymph node involvement are the most frequent metastatic sites, while incidence of brain injury is negligible.

**Case Report:** Male, 64 years old, caucasian, who after clinical and laboratory changes performed magnetic resonance imaging (MRI) of abdomen and pelvis in February 2018, revealing a suggestive area of tumor of prostate peripheral region and presence of bone metastasis. He performed biopsy of prostatic tissue, evidencing adenocarcinoma of the prostate and Gleason 7 (4 + 3). After two days of procedure, the patient presented paresthesia of the right side of the body, being submitted to MRI of the brain showing nodular lesion in left parietal region with central isointense area and peripheral hyper signaled halo, suggestive of secondary implantation. In addition, computerized tomography of the chest was performed without evidence of disease.

**Discussion:** Generally, secondary implants occur in brain territory at an advanced stage of CP, when other sites have already been affected. However, in scenarios where this metastatic synchronicity does not occur, it is postulated that this intracerebral involvement may occur directly by the paravertebral venous plexus or by dissemination of metastatic foci, in this case, bone.

**Conclusion:** Our patient had only bone territory affected, being able to corroborate the hypothesis that metastatic foci of PC can spread and involve the brain, thus evidencing a rare entity worthy of bibliographic deepening.
Ask-a-Doc: Improving Patient-Physician Communication Through Written Aides

Addison Himmelberger
Internal Medicine, Albuquerque, NM, USA

Background: Physician-patient communication is a key component of patient satisfaction and patient-centered care; both of which are increasingly important measures of hospital quality. Recent studies have suggested that written communication aides may be beneficial for patients and for providers since they allow for patient communication in a non-pressured setting.

Design: We developed the “Ask-A-Doc” program consisting of a four-part approach: 1) pre-survey of patients 2) information dissemination and education of patients and nursing staff, 3) pilot of a written communication tool with active survey and 4) post-survey of patients.

Setting: A general medicine inpatient unit at the University of New Mexico Hospital (UNMH), a large academic center.

Participants: The pilot was run for a total of 35 days in 32 patient rooms, equating to 1,120 patient days.

Measurements: Pre- and post-pilot surveys with yes/no answers, number of questions submitted, post-question satisfaction survey with satisfaction rankings from 1-5.

Results: No patients chose to utilize the program during the pilot month and a post-pilot convenience survey indicated that, despite the information dissemination, patients remained unaware of the program. Although multiple measures indicate that UNMH scores below its peers in patient satisfaction, a majority of patients in the convenience survey felt that they were able to adequately communicate with their physician.

Conclusions: Written tools have been proposed as a time-effective way to improve patient knowledge and satisfaction, but Ask-a-Doc suggests that passive forms of communication may not be well utilized. Future studies should focus on improving communication through more active engagement methods.
Can a surgical condition be managed clinically? Spontaneous resolution of Gallstone ileus: a Case Report.

Clara Louise Vianna¹

1 Internal Medicine, Petropolis, Rio de Janeiro, Brazil

**Background:** Gallstone ileus (GI) represents a rare cause of intestinal occlusion, of mechanical pattern, caused by impingement of gallstones in the gastrointestinal tract. It is more frequent in the terminal ileum, through a biliodigestive fistulous path.

**Case Report:** Report of an elderly female patient with complaints of epigastric pain, nausea, vomiting, gas stopping and stool elimination. Initial investigation by simple X-Ray and computed tomography (CT) showed distension of small intestine loops from the terminal ileum, defining GI. Prior to surgical intervention the patient presented new episode of abdominal pain, followed by massive evacuation and consequent improvement of obstructive symptoms. A new CT scan was performed showing no signs of gallstones, defining a spontaneous resolution of this condition, followed by discharged within 24 hours for outpatient follow-up.

**Discussion:** Early clinical suspicion through a sentinel event, such as massive evacuation preceded by abdominal pain, and consequent radiological confirmation, are important considering the low incidence and inconsistent symptoms. And due to occurrence of complications owing to late diagnosis and indolent surgical management, in majority of cases the immediate treatment of GI is the operative one. Therefore, these events rarely evolve spontaneously.

**Conclusion:** We emphasize that precocious diagnostic suspicion allied to abdominal CT are essential for an optimal clinical evolution. Thus this case indicates not also a spontaneous evolution of GI, which configured lower morbidity and mortality to the patient and lower cost to the health system, but also a rare entity worthy of bibliographic deepening.
HTLV-1 associated mielopathy: an anchoring bias case report.

Clara Louise Vianna¹
Internal Medicine, Petropolis, Rio de Janeiro, Brazil

Background: The HTLV-1 infection happens in tropical endemic regions. The transmission occurs via breastfeeding, contaminated needles, blood transfusion and sexually. In Brazil, about 2% of the population is seropositive. 0.3% to 4% develop the HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP). Anchoring describes the human cognitive tendency in relying on the first information received.

Case report: We report a 52 year old black woman, HTLV-1 seropositive, with a 16 year diagnosis of virus associated polymyositis described in her medical record, in treatment but without any clinical improvement. During her re-evaluation by the primary care medical team she presented upper motor neuron lesion signs, urinary incontinency and constipation, incompatible with the previous diagnosis.

Discussion: The anchoring bias hypothesis was raised, since the diagnosis was not questioned over the time. New laboratory exams, electroneuromyography and magnetic resonance imaging were requested. Utilizing the test results and the 1989 OMS criteria, the HTLV-1-associated myelopathy/tropical spastic paraparesis was confirmed and not the polymyositis.

Conclusion: Thus, in the present case report we highlight the importance of the anchoring bias recognition and the need to revise the medical records regarding the reported diagnoses, especially in rare cases in primary health care.
**Assessment of Serum Lipid Levels in Patients with Depressive Disorder and Healthy Controls**

Dietmar Enko¹,²

¹Institute of Clinical Chemistry and Laboratory Medicine, Austria
²Clinical Institute of Medical and Chemical Laboratory Diagnostics, Austria

**Background:** Several studies in the present literature have investigated potential associations between serum lipids and depression, but findings are contradictory. This study aimed to investigate triglycerides, total cholesterol, low-density lipoprotein (LDL)- and high-density lipoprotein (HDL)-cholesterol serum levels in individuals with depressive disorder and healthy subjects.

**Methods:** A total of 94 patients diagnosed and treated with depressive disorder and 152 consecutive healthy controls without depressive symptomatology and a former history of psychiatric disorders were included in this prospective study. After an overnight fasting state of 12 hours they underwent blood drawing in order to investigate the complete lipid status (i.e., triglycerides, total cholesterol, low-density lipoprotein LDL-cholesterol, HDL-cholesterol).

**Results:** All in all, 53/246 (21.15%) subjects had serum triglycerides levels 150 mg/dL, and 104/246 (42.3%) individuals total cholesterol concentrations 200 mg/dL. A total of 94 individuals with depressive disorder had significantly higher median (interquartile range) serum triglycerides levels (108.0 [75.8 – 154.1] vs. 84.0 [63.0 – 132.2] mg/dL, p = 0.014) and also significantly lowered HDL-cholesterol levels (55.0 [46.9 – 123.0] vs. 61.5 [47.4 – 72.6] mg/dL, p = 0.049) compared to 152 individuals without depression, respectively. Total and LDL-cholesterol concentrations were observed slightly higher in patients with depression.

**Conclusions:** Individuals with depressive disorder were found to have elevated triglycerides, total and LDL-cholesterol and lowered HDL-cholesterol serum levels compared to healthy subjects. On the basis of these findings the authors suggest performing routine controls of lipid status in this patient subset.
Differences in Potency of Major Statins Regarding Pleiotropic Effect

Emir Kurtalic
Angiology, Sarajevo, Kanto Sarajevo, Bosnia and Herzegovina

Background: It is known that the efficacy of statins on cardiovascular morbidity and mortality goes ways beyond their effect on LDL-C. Flow-mediated dilatation (FMD) is also well recognized as a surrogate marker for measurement of pleiotropic effects. The aim of this study was to find out if there is a difference in maximal achievable pleiotropic effect measured by FMD, of two major statins (atorvastatin and rosvastatin).

Material/Methods: Two groups of 30 statin-naïve patients with newly diagnosed PAD were randomized. FMD was measured before and two months after starting maximum recommended dose of atorvastatin (80 mg) and rosvastatin (40 mg).

Results: FMD increase in rosvastatin group (from 4,86 to 8,34) was not significantly (p = 0,2319) higher than in atorvastatin group (from 4,75 to 7,70).

Conclusion: For the best pleiotropic effect, there is no proof that maximum recommended dose of rosvastatin is a better choice, compared to maximal dose of atorvastatin.
Apolipoprotein B vs Non HDL Cholesterol Association with Endothelial Markers and Carotid Intima-Media Thickness

David Karasek
3rd Department of Internal Medicine, Czech Republic

Background: Both apolipoprotein B (apoB) and non-HDL-cholesterol (non-HDL-C) are accepted as alternative risk factors or targets for lipid lowering therapy, which correlate more strongly with cardiovascular events than LDL-cholesterol.

Objective: The aim of this cross-sectional study was to evaluate the differences in plasma levels of plasminogen activator inhibitor-1 (PAI-1) and of von Willebrand factor (vWF) as endothelial hemostatic markers and carotid intima-media thickness (C-IMT) as a morphological marker for atherosclerotic vascular disease among dyslipidemic individuals with apoB levels higher, estimated or lower based on regression equation of apoB versus non-HDL-C.

Methods: 594 dyslipidemic subjects without atherosclerotic manifestation were divided into three groups (according to tertiles of apoB levels above, within and below the line of identity): H-apoB (n=200), E-apoB (n=194), and L-apoB (n=200). PAI-1, vWF, C-IMT and lipids, anthropometric parameters, markers of insulin resistance, and inflammation were measured. Differences in variables between groups were analyzed using ANOVA.

Results: There was a strong association between apoB and non-HDL-C. The correlations of apoB and of non-HDL-C with markers of endothelial damage, and C-IMT were very similar. Despite this facts, individuals with higher apoB levels had significantly higher levels of PAI-1 compared to individuals with estimated (p<0.05) or lower apoB (p<0.001). There were no significant differences in vWF, C-IMT, markers of insulin resistance, obesity, and inflammation.

Conclusion: Individuals with apoB higher than predicted by non-HDL-C had significantly higher levels of PAI-1, which may represent the increased risk of future atherothrombotic events.

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Serum Levels of Retinol-Binding Protein-4 And Uric acid: Associations with BMI, Kidney and Liver Function, Minus Age

Bozena Czarkowska-Paczek

Department of Clinical Nursing, Warsaw, Poland

Retinol-binding protein-4 (RBP-4), liver derived plasma retinol transporter, is implicated in the pathophysiology of type 2 diabetes (T2D), metabolic syndrome (MetS), and cardiovascular diseases (CVDs). Uric acid, the product of purine nucleotides metabolism, is exerted by the kidney. High blood concentrations of uric acid leads to gout and insulin resistance. Retinol intoxication triggers gout attacks.

Aging is a natural process in the decline of function and structural changes in many organs. The kidney happens to be one preferential target of aging, as liver function similarly deteriorates with age.

This study examined the association between serum levels of RBP-4 and uric acid and their correlations with age, kidney and liver functions, as estimated by serum levels of transaminases and creatinine, respectively, as well as Body Mass Index (BMI).

Healthy individuals 20–90 years-of-age had been included. Serum RBP-4 was assayed by the nephelometric method using BN ProSpec (Siemens, Munich, Germany), and uric acid by the bichromatic end-point method using Dimension EXL 200 (Siemens, Munich, Germany).

Serum RBP-4 correlated positively with uric acid ($p=0.000025$). RBP-4 and uric acid correlated positively with BMI ($p=0.018$, $p=0.00003$, respectively), AST ($p=0.005$, $p=0.0001$, respectively), ALT ($p=0.002$, $p=0.0005$, respectively), creatinine ($p=0.005$, $p=0.00003$, respectively), but not with age.

In conclusion, RBP-4 correlates with uric acid in the serum of healthy individuals, but these concentrations do not depend on age. The increase of RBP-4 and uric acid serum concentration could result from the increase of BMI and the decline in renal and liver function.
Electronic Health Record (EHR): A Patient Data Management System: Self-Developed Using Clinical and Research Experience in a Private Practice

Gracjan Podgorski

Private practice, Port Elizabeth, Eastern Cape, South Africa

Introduction: EHR has the potential to improve the efficiency and effectiveness of health care providers. Available studies have shown quality-related advantages of EHRs over paper records. Low levels of adoption of EHRs is multifactorial, the absence of a “comprehensive” EHR being a significant barrier.

Goals: To create a customized EHR to provide higher-quality care and service for patients in busy diabetic private practices.

Methods: The EHR (Vulcan Net 2.0 Visual Studio 2010) was developed in 1995 in collaboration between clinician (GP) and programmer (EJ). Subsequently, many enhancements were added to the software to accommodate the rapidly growing amount of information.

Results: The EHR system facilitates prompt electronic access to clinical information such as patient’s details, clinicians’ notes and automatically downloaded laboratory and image results.

EHR creates prescriptions, ID cards for the patients (with patient and health provider contact details, photographs, demographics, list of medical problems, allergies), cumulative pathology reports and medication log, dates for follow-up visits and customized letters to other health service providers.

The collected patient statistics are used to create a list of potential candidates for clinical trials as well as populating a list of patients for internal and external audits.

Conclusion: The EHR allows for paperless handling of clinical information of 11 000 (including 3750 diabetics) patients. It has the potential to be utilised in clinics, hospitals and research facilities.
Study of Clinical Profile in Mass Ammonia Inhalation

Chitrangada Yadav²
Internal Medicine, Pune, Maharashtra, India

Introduction: Ammonia is highly irritant colorless gas with severe pungent odor. It is used as a refrigerant gas in cold storages in the form of Liquid ammonia under high pressure. We managed 20 cases of accidental exposure to large concentration of gaseous ammonia.

Aim: To study the clinical profile of these patients and their hospital course.

Material and Methods: 20 female patients received at Emergency room of Sundaram Arurhaj Hospital, Tuticorin after a pipe carrying ammonia gas burst at a sea food storage. All victims were studied during their hospital stay and one week followup.

Observations: All female patients in 20s-30s, mean age was 23. They presented with varied presentations. All developed significant respiratory distress. Pharyngeal symptoms (17 cases), Dyspnoea (16), Itching (15), Cough (14), Chest pain (14). Ophthalmic symptoms - Burning, Redness, Photophobia (20). 3 groups: Group 1: (10) sore throat, mild redness in eyes, Chest X ray Normal. Group 2: (7) Moderate throat pain, conjunctival suffusion, moderate respiratory discomfort, Chest Xray Increased Bronchovascular markings. Group 3: (3) Severe respiratory distress, falling O2 saturation, Decreased consciousness, Severe Rales, Rhonchi on examination, Chest Xray opacification. corneal burns (3) All patients were given IV hydrocortisone 200mg. Nebulisation, supportive O2.

Group 1: No specific treatment. Discharged 2nd day.

Group 2: Improved slowly with decremental cough, mean duration 7 days

Group 3: Significant complications 2 were intubated on IV steroids and aminophylline, Gradually extubated.

Conclusions: Exposure to ammonia gas can lead to severe respiratory distress. The structures most commonly involved are the lungs and eyes and skin. Steroids, oxygen and bronchodilators remain the main stay for managing such patients.
Do Taiwanese People Have Greater Heavy Metal Levels Than Those of Western Countries?

Shoa-Lin Lin

Intensive Care Unit, Department of Internal Medicine, Kaohsiung city, Taiwan, Taiwan

Introduction: This study investigated whether the heavy metal levels were higher in persons in Taiwan as compared to persons in Western countries.

Methods: Four common blood heavy metal levels including lead, mercury, arsenic and cadmium were measured in 40 apparently healthy adults. Since copper was not responded to ethylene diamine tetra-acetic acid (EDTA) infusion, only urine lead, arsenic and cadmium were determined by applying the body burden concept after calcium disodium EDTA infusion. These three heavy metals were extracted from daily urine samples for 3 consecutive days.

Results: The study demonstrated that the blood lead (24.46 ± 9.69 μg/L), mercury (9.64 ± 6.98 μg/L), and cadmium (0.73 ±0.27 μg/L) levels in Taiwanese were greater than those of the Americans, while mercury and cadmium levels were greater than those of the Germans. The first-day urine lead, arsenic, and cadmium level was 77.9%, 33.1%, and 62.4%, respectively, of total lead, arsenic, and cadmium excretion during 3 days. It indicates that the first-day urine lead and cadmium excretion represented most (60%) of the lead and cadmium excretion in those three days.

Conclusion: This study demonstrated that Taiwanese population has higher blood mercury and cadmium levels than the Western populations. To study the urine lead and cadmium body burden of patients, detection of the first-day urine lead and cadmium levels instead of detection of the urine lead and cadmium levels after collecting the total urine for 3 days is more time- and cost-effective.
Epidemiological Characteristics of Lymphomas in the Hospital de Clinicas of Paraguay

Jorge Luis Cano
Hematologia, San Lorenzo, Central, Paraguay

Introduction: Lymphomas are lymphoid cells neoplasms that are divided in Non Hodgkin Lymphoma (NHL) and Hodgkin Lymphoma (HL). The raise of the appearance in a 150% since 1940 to the last years represents an important public health issue. In Paraguay there is very few data about the epidemiology of these neoplasms. The objective of this investigation is to describe the epidemiological, clinical and histological characteristics of the lymphomas that were diagnosed in the Hematology Department of the Hospital de Clinicas of Paraguay from 2014 to 2016.

Methods: Observational, descriptive, retrospective, transversal cut study.

Results: The average age was 45 years old, with a range from 17 to 87 years. In the 34% (n=34) of the cases, the diagnosis was HL, and in the 66% (n=66), NHL. In the group of HL, the most common histology was the nodular sclerosis variant, with 61,76% (n=21). In the group of NHL, the most common histology was the diffuse large type B cells lymphoma, with the 45,45% (n=30). The stage of the disease was IV in the 53,42% (n=39) of cases.

Conclusion: we found a younger presentation age and we didn’t find the bimodal distribution of age typical of the HL. The diffuse large type B cells was found in almost half of the NHL; that differs from other series in other regions of the world, probably supporting the multifactorial influence in the pathogenesys of this disease. The high percentage of patients presenting with an advanced disease puts on evidence the diagnostic delay.
[15]aneN₄S as a Potential Chelating Agent for Metal Intoxications

Nuno Torres¹²

¹Research Institute for Medicines and Pharmaceutical Sciences (iMed.UL), Lisbon, Portugal
²Hospital Pulido Valente, Lisbon, Portugal

The toxicity induced by metals has a high interest in modern medicine due to the severe clinical outcomes and treatment limitations. Chelating agents currently used in clinical practice have many side effects, low specificity and controversial efficacy. In view of this, the research of novel chelating compounds with higher selectivity and lower toxicity is of outmost interest. In this work we report cytoprotective effects of a thiatetraaza macrocycle, 1-thia-4,7,10,13-tetraazacyclopentadecane ([15]aneN₄S), against Cd²⁺ and Hg²⁺ toxicity in human mammary epithelial cells (MCF10A). The synthesis and characterization of the macrocycle [15]aneN₄S, as well as the determination of its thermodynamic stability with several metal ions was previously performed [1].

The cytoprotective effects of [15]aneN₄S were evaluated using the MTT assay, upon the exposure of MCF10A cells to different proportions of metal:ligand for 24 h. In addition, the cytotoxicity profile of [15]aneN₄S, Cd²⁺ and Hg²⁺ was also assessed. [15]aneN₄S at concentrations of 25, 50 and 100 µM, decreased cell viability to values of ~70% of controls, which can be ascribed to the chelation of metal ions essential to cellular functions. Exposure of MCF10A cells to Cd²⁺ and Hg²⁺ (75 µM, 24 h) led to a decrease in cell viability to 15% and 1%, respectively. [15]aneN₄S has shown to be efficient counteracting Cd²⁺ toxicity, although it was not able to circumvent Hg²⁺ toxicity, even at lower Hg²⁺ concentrations. Overall, the results suggest that [15]aneN₄S is an effective protective agent for Cd-induced cytotoxicity and inefficient against Hg-induced cytotoxicity in human mammary cells.
Legitimacy of Clinical trials on Human in India - A Human Right Perspective

Sankalp Shastri

internal medicine, jaipur, rajasthan, India

Right to health has been recognized by Constitution of India and International declaration and conventions. Even Millennium Development Goals of 2000 has also stated as one of eight goals to be achieved by world governments. There are studies and reported cases where this right has been abused in garb of administering medicine for experiments. Patient is quite unknown about experimental drug and sometimes it results into serious illness affecting their health.

Many countries have made laws whereby it is required that clinical trials of drugs must be with consent of patient. Due to high costs involved, drug companies are constantly exploring ways to outsource clinical trials to countries that provide services at lower costs within timelines.

The Indian Supreme Court has given directions in various case to adhere to experiment of drugs with ‘informed consent’ only. Court had shown its grave concern as it involves legal, ethical, compensatory and health issues.

Looking to the growing demand of transparency and knowledge of the patient, India launched its own registry, Clinical Trial Registry - India (CTRI) on July 20, 2007. Clinical trials undertaken by postgraduate students for their thesis should be also registered, as it facilitates publication.

In-spite of this registry system, such experiments are in vogue. Proper procedure is not followed and no strict action is taken against them. Therefore paper proposes to make an in-depth study of the problem in India and deficiencies of laws. Further to put forward useful suggestions to contain and control this problem.
Paraquat Poisoning: Emerging Deadly Poison & its Outcome Admitted in the Rajshahi Medical College Hospital, Bangladesh

Abu Shahin Mohammed Mahbubur Rahman

Internal Medicine, Rajshahi, Bangladesh

Background: Paraquat (1, 1-dimethyl-4,4'-bipyridium dichloride), a member of the bipyridyl group of herbicides, used widely as weed killer and is a highly toxic compound. It has a good safety record when used properly. But it came into disrepute because of accidental or intentional ingestion leading to a high mortality. The present study done to evaluate the outcome of paraquat poisoning patient admitted in the Rajshahi Medical College hospital.

Materials and methods: The present study is done on paraquat poisoning, its modes of presentation, complications and outcome. The study is conducted over a period of 1 and half year and 17 cases of paraquat poisoning were documented at Rajshahi Medical College Hospital, between July 2015 and October 2016.

Results: All cases were of intentional ingestion i.e. suicidal attempt. Female were (59%) and male were (41%). All patients had delayed hospital arrival. The most common mode of presentations was with oral ulcerations (100%) & acute kidney injury (64.70%) among them three patients needed dialysis. Respiratory failure (47%), hepatic involvement (58%), multi organ failure (35%) and circulatory failure (30%) were the other morbid events. The overall mortality was 65%. Late referral, multi organ failure, respiratory failure and circulatory failure were correlated to the mortality in our study.

Conclusion: As till now there is no antidote of paraquat poisoning as well as it has high mortality so we must develop an appropriate prevention and control strategy in the community of Bangladesh.
Sugar Poisoning Admitted in the Rajshahi Medical College Hospital, Bangladesh

Abu Shahin Mohammed Mahbubur Rahman
Internal Medicine, Rajshahi, Bangladesh

Abstract: Sugar poisoning has not been recorded in the past. Literature does not show such thing and didn’t publish any article regarding sugar poisoning or toxicities. We are going to present a male normotensive, non-diabetic, non-alcoholic patient named Mr. Mojahar Ali, 30yr-old hailing from Bororangamatia, Puthia, Rajshahi got admitted in the RMCH on 27/10/2017 with the history of ingestion of one kg sugar. He took that amount of sugar after betting with his friend. Thereafter he felt unwell followed by unconsciousness. We excluded other possible causes of unconsciousness including drugs, fever or other metabolic disorders. On admission his GCS level was 9, pulse – 84/m, BP-90/60. On investigation RBS-19mmol/l, creatinine-3.17, Electrolytes- Na 154,K-2.17, Cl-119,Hco3-18mmol/l, Bilirubin-2.2, SGPT-70u/l,CPK-549U/l. We treated the patient at ICU and subsequently with conservative management patient was improved.

Conclusion: Previously we didn’t have any concept regarding sugar toxicities. But from our case we can be pretty sure that sugar is a toxic if u take large amount of sugar at a time.
Russell’s Viper (Daboia Russelli) Bite in Bangladesh

Abu Shahin Mohammed Mahbubur Rahman

Internal Medicine, Rajshahi, Bangladesh

Background: Venomous snake bite is an important public health hazard in south Asian tropical countries including Bangladesh. Russell’s viper was seemed to be rare in Bangladesh. Since 1920s, no case of envenoming by this species has since been reported in Bangladesh. From 2013, several cases of Russell’s viper bite have been reported in the southern-western part of Bangladesh.

Methods: This study was carried out in the Rajshahi Medical college Hospital (18 cases) and Patuakhali district hospital (1 case) from March 2013 to June 2017. All cases were underwent structured clinical assessment and antivenom was given in envenomed cases. Russell’s viper snake bite was confirmed either by the brought specimen, and/or clinical history and examination with 20 minutes whole blood clotting test.

Results: The most common mode of presentations was local swelling and bleeding manifestation. Almost all patients consulted traditional healers before admission and had torniquet applied. The complications noted were acute kidney injury (AKI), myotoxicity and eventually multi-organ failure to death (in 4). In Rajshahi almost all patients had AKI, among them 9 patients required dialysis but no neurological manifestation was present.

Conclusion: As Russell’s viper is a newly recognised cause of venomous snakebite in Bangladesh. The presenting features of Russells’s viper bite seems to be different between two parts of Bangladesh, suggests differences in venom composition requiring investigation. Hospital admission was delayed by all patients seeking traditional treatment. Community awareness, training of healthcare staff, and dialysis capacity should be improved in affected areas and also needs geographical survey.
Background: Harpic is a commonly used toilet cleaning solution which contains hydrochloric acid. Its ingestion can affect both the oesophagus and stomach. The degree and extent of damage depends on the quantity, and the mode of intent. This poisoning is gradually increasing in Bangladesh due to poorly regulated sale of these substances. The most commonly affected population are the young with having suicidal intent.

Methods: This study was carried out among of all patients with harpic poisoning admitted at the Rajshahi Medical college hospital. All patients assessed clinically and given supportive management. Harpic was diagnosed by history and also brought specimen.

Results: In this study 15 patients were included. Among them 3 are male and 12 are female and an average age was 21.5. All patients' intent to take harpic was committed to suicide. The most common presentation was burning sensation of mouth and throat with vomiting. Almost all patients had oral ulceration. Five patients had hematemesis (33.33%) and upper abdominal pain (33.33%). Endoscopic findings within 48 hours of admission, six patients had oesophageal ulcer (40%), five patients had gastric ulcer (33.33%) and one patient had duodenitis and rest of were normal findings.

Conclusion: Harpic poisoning is one of the common poisoning in the southeast Asia, mostly are suicidal. Early upper GI endoscopy in now regarded to have a very crucial role in both diagnosis and management. To control the harpic poisoning social and community awareness is necessary as well as government should come forward to take appropriate measures.
At sea levels we live at an average pressure of 14.7 psi or 1 atmosphere. Breathing in high pure oxygen in pressurized chambers, increases the overall oxygen delivery to all the human tissues, even to places with restricted blood flow or blockage. It allows everybody fluid, tissues, blood, lymph and CSF to absorb the life giving gas. High pressure oxygen helps in inhibiting pathways involving HIF1-α, VEGF, neutrophil infiltrations, and MMP-2 & MMP-9, helping not only in rejuvenating, but also deferring the ageing of skin and helps in reexploring youth, used as a major cosmetic tool.

The therapy has been long used as a treatment of conditions like decompressive sickness and CO2 poising, but there is much more to this therapy. The “supercharged” tissues in body increases the oxygen supply in every organ and system and help in healing of virtually every illness, even improve post-surgery recovery.

Most clinicians lack knowledge or training about its benefits. There have been remarkable results in problems like stroke, heart attack, infections, burns, difficult wound healing, poising, Multiple sclerosis. With progressive and continuous use it can also help improve outcome in autism, ADD, cerebral palsy.

The history of this therapy goes back to 1662 but not until 21st century it began to emerge as a major medical therapy, have not only curative but also preventive roles.
On Medical Philosophy in Internal Medicine

Michael Michailov

Pharmaco-Physiology, Muenchen, Germany

INTRODUCTION: Philosophy is regina scientiarum considering all sciences (Immanuel KANT) reflected by-ethics-aesthetics-epistemology. Central position of internal medicine in health sciences is fundamental for medical philosophy, medicine, psychology, sociology: The last one needs enlargement including not only ethics, but also approaches to epistemology (incl. metaphysics&scientific theory) & aesthetics (Ref.: FISP-2013-Athens:464-5; ISIM-2010-Melbourne Int.Med.J. 40/1:144-5).

CONCEPTION-Discussion: A. EPISTEMOLOGY. An integrative internal medicine needs enlarged information in normal & pathological psychophysiology (e.g. psycho-neuro-immunomodulation). An integrative therapy incl. Chinese-Indian & other traditional medicine in education & treatment has to be discussed. Reconsideration of medical, psychological-psychiatric notions acc. to axiology-logic-semantic is recommendable.

B. MORAL PHILOSOPHY. Not only modern ethical-theories, but also KANT’s human obligations have to be considered: To himself-patients (a), other humans-medical-personnel (b), sub-human, e.g. reduction of animal experiments (c), suprahuman beings: Moral & scientific frames about medical-applications of theological-practices of great religions (Brahmanism-Buddhism/Christianism-Mosaiism/Confucianism-Taoism/Mohammedanism, humanistic atheism) (d).

C. AESTHETICS. Considerations related to A-B are necessary destining volume of paradigm-changes in application of internal-medicine by non- & surgical therapies, leading to pathophysiological & psychopathological effects (primum non nocere), e.g. intraoperative-radiotherapy (IORT).

CONCLUSION: Establishment of regular common congress-sessions of ISIM (also continental/national societies) with philosophical (FISP-ISB-EACME,etc.), psychological (IUPsyS,etc.), physiological (IUPS,etc.), clinical societies (ICC-FIGO-SIU-WFN,etc.) could open new scientific & political dimension, leading to humanization, higher efficacy & internationalization of medicine in context of UNO-Agenda21 for better health-education/etc. on global level. This could be supported by foundation of an INTERNATIONAL ACADEMY FOR INTERNAL MEDICINE (IAIM) (similar to Eur.Acad.Neurol. (EAN, founded 2015 in Berlin, 1st Congress).
Thyroid Metastasis from a Breast Cancer: a Case Report

Beatriz Ferreira do Viso

Oncology, Santos, São Paulo, Brazil

The thyroid gland is a very unusual site for metastatic cancer. Only 2-3% of metastatic tumors develop at the thyroid and the renal cell carcinoma is the most common, followed by malignancies of gastrointestinal tract, lungs and skin. The breast cancer metastatic to the thyroid gland is very rare. In this study, we present a case of a Brazilian 50 year-old female with a 3-year history of infiltrative breast cancer that presented with hoarseness, cough and dyspnea. A mammography revealed two new nodes and a PET-CT scan showed a hyper metabolic area at the left lobe of the thyroid gland. The patient underwent a total thyroidectomy and the anatomopathological exam of the gland revealed a mammary metastatic carcinoma. After the surgery, patient had begun receiving oral chemotherapy and replacement of thyroid hormones. Even though metastasis to the thyroid are rare, it is important to seek for nodes at this gland when a breast cancer is diagnosed and, contrary to this, breast cancer should be considered as a primary site when thyroid nodes with metastatic characteristics are found.
A Case Report of a Black Widow Spider Bite and its Complications

Anastasios Stefanopoulos

Internal Medicine, Argos, Argolida, Greece

Objective: We describe a case of a male patient who presented with symptoms of acute abdomen and chest pain as a consequence of a spider bite. This diagnosis was confirmed after thorough medical workup in our clinic.

Case report: A 28 year old Caucasian male presented to the Emergency Department of our clinic complaining of sudden chest pain as well as abdominal pain that reflected to the back. These symptoms had started immediately after a bite, possibly by a spider, in the inner side of the forearm. The abdominal wall was tense, hard and painful on palpation and there were no bowel sounds.

Laboratory results revealed severely elevated CPK, WBC, Troponin and D-dimers. In ABG analysis, metabolic acidosis was evident with pH=7.27 and lactic acid was 7mmol/L. Chest-CT was negative for Pulmonary Embolism and the USD-abdomen was without any pathological findings. He was transferred to an ICU and his clinical status got progressively worse and was therefore he was given the anti-arachnoid serum due to the severity of his symptoms. His symptoms improved immediately after the administration of the serum. He was discharged 5 days later without any further complications.

Conclusion: Available experimental evidence regarding a spider bit and its clinical symptoms is limited. Possible mechanisms include a neurotoxin, known as, a-Latrotoxin. Treatment is usually symptomatic but in severe cases the anti-arachnoid serum is necessary regardless of it high potency as an allergen. In clinical practice, physicians should poses awareness of this type of bite and its possible complications.
As a foreign medical graduate internist serving in a large hospital in New Mexico, a state that 10% of its residents are immigrants, and ~4% of its population (~85,000) are undocumented, facing the challenges in the healthcare for immigrants is a part of my everyday life. A situation that I observe, relate to, and am devoted to improving.

With cancer (the emperor of all maladies) being the most devastating illness known to man, the challenges facing the general healthcare for this vulnerable group are tougher when faced with cancer management.

Age appropriate screening is the essence of successful cancer management. It catches the disease in its early, easy-to-treat state. Immigrants, however, are less likely to undergo screening, which is largely attributed to the limited access to care. It is estimated that about 17% of documented and nearly 39% of undocumented immigrants are uninsured. Lacking health insurance coverage, immigrants tend to use emergency departments as their primary care facility. They do not sign up for regular cancer screening programs. The problem worsens with the undocumented who fear divulging their undocumented status. Cultural barriers and lack of health education leave immigrants with misconceptions against screening for certain cancers; ex. cervical, colon and breast.

To alleviate this burden, in first arrival screenings, immigrants shall be educated of the importance of screening and assigned to primary care providers. Awareness should be raised against cancer precipitating behaviors. Physicians should pay attention to prevalent cancer predisposing infections; ex. hepatitis B, H. Pylori, HIV and HPV.
There was a record 8.3 million rise in the number of displaced persons from 2013 to 2014 - marking the highest level of forced displacement since World War II. This implies one in every 122 humans is now living either as a refugee, an internally displaced person, or seeking asylum. We describe the challenges and provide suggestions when caring for refugees resettled in New Mexico.

New Mexico offers a variety of free services through two refugee resettlement agencies: Catholic Charities and Lutheran Family Services. These include case management including social, health, and mental health services, as well as cash assistance. Other services include community programs such as English language training, community development with local ethnic groups, and assistance with employment (including pre-employment training, job coaching and placement services). Housing services are also available, including relocation services, basic furnishings, and household items.

Prioritizing basic needs of refugees remains critical, but the ultimate goal is to design and maintain an integrated, culturally appropriate system that focuses on the interrelationship between physical, mental, social, and cultural aspects while delivering to these new New Mexicans.
Improving Lung Cancer Referrals in Rural South Africa with a Novel Electronic solution: A Model for Resource Poor Countries

Andre Dippenaar

Internal Medicine, Cape Town, Western Cape, South Africa

We argue that implementation of a model using an electronic app or online system and reduplication of specialist services at a secondary level hospital improves referral times and access to care in resource limited settings.

The aim of this pilot study was to analyse the waiting time for patients in a rural clinical setting with suspected lung cancer and compare them to international standards. We introduced a novel electronic rapid referral system to facilitate suspected lung cancer cases and evaluated its’ impact for 2 years. We developed an online referral tool/app with the eye on creating a database of patient information, establishing statistics on the burden of lung cancer and streamlining the referral of patients with suspected lung cancer.

Our null hypothesis stated that patients in a rural geographic referral area with suspected lung malignancies are referred timeously to secondary and tertiary centers for further management. An international standard of care derived from the literature was given at 42 days with standard deviation of 14 days.

196 records were collected, with final sample size of 176 (n) with population mean of 42, variance of 196 and sample mean of 37 days. We calculated a Z-score of -4.73804 and P value to be 0, which made the result significant at p
Beta-Trace Protein and Mortality in Hemodialysis Patients – Beyond Kidney Function

Dietmar Enko\textsuperscript{1,2}

\textsuperscript{1}Institute of Clinical Chemistry and Laboratory Medicine, Austria
\textsuperscript{2}Clinical Institute of Medical and Chemical Laboratory Diagnostics, Austria

Background: Beta trace protein (BTP) has been described as an endogenous biomarker of kidney function and also proposed as a novel marker of cardiovascular risk.

Methods: Cardiovascular and all-cause mortality were investigated according to BTP concentrations in 2962 individuals referred for coronary angiography from the Ludwigshafen Risk and Cardiovascular Health study and in 907 patients with type 2 diabetes mellitus undergoing hemodialysis from the German Diabetes mellitus Dialysis study.

Results: Hemodialysis patients had considerably higher median (interquartile range) BTP concentrations (6.00 [4.49 – 7.96] mg/L) and a fourfold increased mortality rate compared to coronary angiography patients (BTP concentration: 0.55 [0.44 – 0.67] mg/L). After adjustment for age, sex, cardiovascular risk factors and creatinine, 4D patients in the highest quartile (7.96 mg/L) had a 1.6-fold increased rate of all-cause mortality (hazard ratio [HR] 1.62, 95% confidence interval 1.19 to 2.20) compared to the lowest quartile (4.49 mg/L) (P = 0.002), respectively. In patients undergoing coronary angiography, the adjusted HRs (95%CI) for all-cause and cardiovascular mortality were 1.23 (1.0 – 1.51) and 1.27 (0.99 – 1.63) in the highest (0.67 mg/L) compared to the lowest (0.44 mg/L) quartile (P = 0.043 and 0.062). In both cohorts, the BTP/creatinine ratio was a stronger predictor of all-cause and cardiovascular mortality compared to BTP as single marker.

Conclusion: BTP was associated with all-cause mortality independently of renal function in hemodialysis patients. The BTP/creatinine ratio was more predictive for all-cause and cardiovascular mortality in hemodialysis patients and individuals referred for angiography compared to BTP alone.
Evaluation of Further Cardiovascular and Chronic Kidney Disease Risk Factors in an Apparently Healthy Population

Attilio Di Benedetto

Medical Direction, Naples, Italy

Introduction: Cardiovascular disease (CVD) prevalence is on the rise in industrialized countries, presenting a significant societal-economic burden.

Methods: During ‘Prevention Races’, organized to promote sport, health, and solidarity, participants were evaluated free of charge by different specialists including a nephrologist for CVD and CKD risk factors. The parameters assessed were: blood pressure, weight, height, waist circumference, BMI and body composition to determine hydration and nutritional status in terms of lean and fat body mass. Lean (LTI), Fat (FTI) tissue indexes and ECFO were evaluated by multi-frequency bioimpedance spectroscopy (BIS).

Results: 1081 subjects were evaluated: 416 (38.5%) were male (m) and 665 (61.5%) were female (f); mean age was 54.46 (+ 15.9) years in m, mean age 50.17 (+15.2) years in f; 5.5% m and 6.8% f referred dyslipidemia; 4.3% m and 2.4% f referred diabetes; 21.6% m and 13.4% f were hypertensive; 2.6% m and 0.5% f referred heart disease; 0% m and 2.6% f referred hypothyroidism; 1.2% m and 1.5% f referred CKD. Mean systolic blood pressure (SBP) was 125.38 (+19.18) mmHg and mean diastolic blood pressure (DBP) was 75.85 (+11.3) mmHg.

Conclusions: In a large sample of apparently healthy persons, a relevant proportion of male compared to female had more risk factors as higher SBP, ECFO, high FTI, but also additional CVD/CKD risk factors such as obesity, dislipidemia, smoke, and diabetes. In stratifying general population for risk factors, body composition appears to be an important factor to be considered for the correct classification of fat body mass and ECFO.
Unrelated Volunteer Kidney Paired Chain Donations: Call for Altruistic Kidney Donor Volunteer Transplants

Neil Burman¹
principal, Cape Town, western cape, South Africa

Despite major advances, and family donation, many kidney failure patients languish in increasing numbers on costly dialysis...

Long-term dialysis reduces quality, productivity and longevity, and costs estimated £75000, three times as much as a transplant and its management...

Only mandatory cadaver organ harvesting from cadavers or prisoners, or people selling a kidney, provide lots more kidneys for awaiting dialysis patients; but are unacceptable for most.

Yet living volunteer unrelated kidney transplants last almost twice as long as cadaver grafts. We only need one kidney, and serious risk to the donor from elective unilateral nephrectomy is calculated to be trivial, about 1:3000 in healthy donors; in whom even advanced age hardly matters.

Following the principle of donation to an unknown recipient, up to 88 such transplants have been done in a chain in the USA. https://www.newswise.com/articles/world-record-kidney-chain-extends-with-inspired-organ-donors.

Age is no limit- even 85 years, it’s health that matters. With well elderly donors, only the volunteer’s spouse may feel anxious. . https://www.express.co.uk/news/uk/462639/Woman-donates-kidney-to-complete-stranger-aged-85

Based on websites, probably thousands of such altruistic kidney transplants have been done worldwide. .

Such paired transplants were done at a local hospital in Gauteng in 2015, the laws in all continents allow such donation.

Such kidney gift by a well elderly has given lifesaving service over 2 generations for 104 years. Unlike young donors, the elderly donor doesn’t have to worry about caring for children, or working for a living, or longevity.

So we all need to consider such altruistic donations for dialysis patients.
Pathophysiology of Hypertension: An Assessment of Xenon-133 Washout Curves

Sebastiaan JW van Kraaij

1Department of Internal Medicine, Utrecht, -- Please Select --, The Netherlands
3Department of Internal Medicine, Maastricht, The Netherlands

Introduction
The Xenon-133 washout technique can be used to assess mean renal blood flow as well as intrarenal blood flow patterns. Oscillatory patterns in curves may reflect vasomotion, while homogenization of blood flow may point to redistribution of flow.

Methods
Renal blood flow was assessed by Xenon-133 washout over a period of 180 seconds. Curves were fitted to one- or two-phase decay models and oscillation in the curves was calculated using standard deviation of residuals. All measurements were obtained before contrast was injected. We compared 28 patients with essential hypertension (EH) to 8 patients with fibromuscular dysplasia (FMD) and 27 patients with atherosclerotic renal artery stenosis (ARAS)

Results
For two-phase decays, fast decay was lower in FMD and ARAS when compared to EH (p<0.001). Slow decay was lower in ARAS compared to EH (p=0.002). Mono-exponential decays did not differ significantly between groups (p=0.088). Oscillations in curves were lower in EH in comparison to both FMD (p=0.004) and ARAS (p=0.001).

Discussion
A fall in the fast blood flow component in FMD and ARAS points to either redistribution of blood flow from cortical nephrons with high perfusion rate to deeper nephrons with slower flow rates or possible recruitment of ‘dormant’ cortical nephrons. Enhanced oscillation patterns may be due to an increase in local vasomotor activity. Lesser oscillation in EH patients could mean that this pathophysiological process is not activated in this group.

Key words  Hypertension, Xenon-133, fibromuscular dysplasia, atherosclerotic renal artery stenosis
Relation of Calcium Phosphorus Product with Cardiovascular Risk and HsCRP in Hemodialysis Patients

Aslan Celebi
Department of Internal Medicine, Turkey

Objective: In extensive studies done on chronic kidney disease (CKD) patients, dysregulated bone mineral metabolism is closely associated with the risk of cardiovascular disease and increased risk of morbidity and mortality is revealed. In this study we examine the relationship between calcium phosphorus product which is known to be an independent risk factor in chronic hemodialysis patients and HsCRP values.

Materials-methods: Patients were grouped into two according to presence of ischemic heart disease. In addition, in subgroup analysis of our study, all groups were divided into two according to CaXP levels being under 55 (< 55) (Group A) and over 55 (≥ 55) (Group B) and again compared in terms of independent ischemic heart disease.

Results: A positive correlation was found between CaXP and HsCRP in hemodialysis patients (p < 0.001). The correlation between CaXP and HsCRP was statistically more significant in ischemic heart disease (IHD) patients compared to non diseased patients (p < 0.001; p < 0.02). In the analysis of the subgroup study, it is found that HsCRP values were statistically higher in group A compared to group B (p < 0.001).

Conclusion: In our study, we found a significant relationship between CaXP and HsCRP in chronic hemodialysis patients. Also we think that in chronic hemodialysis patients with target CaXP values (CaXP
Hypophosphatemia in Patients Treated with Intravenous Iron

Bruno Boietti²

Internal medicine research unit, Ciudad Autonoma de Buenos Aires, Buenos Aires, Argentina

Hypophosphatemia has been described as an adverse effect of intravenous iron (IVI). We aimed to evaluate the association between IVI and hypophosphatemia in a population with high IVI requirements.

Cross-sectional study between 2010-2017 of patients from the Institutional Registry of hereditary hemorrhagic telangiectasia HHT (ClinicalTrials.gov NCT01761981) were reviewed and those who had phosphatemia measurement were included.

The association between hypophosphatemia and IVI treatment in the previous month was analyzed by cluster in a logistic regression model.

Of 477 patients in the registry, 92 with phosphatemia measurements were included. A total of 572 measurements of phosphatemia were analysed. 72 patients were women with mean age 60 years old (SD 17.29). At least one episode of hypophosphatemia occurred in 31 patients (34%), moderate (1-1.9 mg/dl) in 13 (42%) and severe (IVI was prescribed in 37 patients (40.22%) and 14 of them had at least one episode of hypophosphatemia. When comparing laboratory parameters in patients with or without IVI, significant differences were found in phosphatemia (mean 2.76 mg/dl (SD 1.04) vs 3.31 mg/dl (SD 0.89), P 0.01).

IVI greatly increased hypophosphatemia risk (OR 5.87 CI 95% 2.75-12.51, p 0.01).

An association between IVI and hypophosphatemia was observed, severe in one case. Clinicians should be aware of this potential complication and phosphate measurement would be advisable in patients treated with IVI.
Risk factors for Acute Kidney Injury Among Patients Suffering from Chikunguna: Experience from a Tertiary Care Hospital of Bangladesh

Muhammad Rahim
Nephrology, Dhaka, Bangladesh

Introduction: Chikungunya is a rapidly spreading mosquito-borne viral infection of global concern including Bangladesh. Acute kidney injury (AKI) is a less well described complication of chikungunya. This study was designed to evaluate the frequency of AKI among patients with chikungunya and to evaluate possible risk factors.

Methods: This case-control study was done in a tertiary care hospital in Dhaka, Bangladesh from May to October 2017. Adult patients (18 years) with confirmed diagnosis of chikungunya were included in this study. Patients suffering from chikungunya complicated by AKI were cases and those without AKI were controls.

Results: Total patients were 107 (male 61, female 46) with a mean age of 35.6 (range 19–84) years. Common comorbidities were diabetes mellitus (DM) (22, 20.6%), hypertension (19, 17.8%) and chronic kidney disease (CKD) (13, 12.1%). Presentations were fever (93, 86.9%) or history of fever (14, 13.1%), joint pain (95, 88.8%), rash (25, 23.4%) and diarrhea and/or vomiting (30, 28%). Fourteen (13.1%) patients required hospitalization. Eleven (10.3%) cases were complicated by AKI. Risk factors for AKI included increasing age (55 years, OR=2.55, 95% CI=0.70–9.33, p=0.1550), DM (OR=28.73, 95% CI=5.57–148.10, p=0.0001), CKD (OR=31.0, 95% CI=2.94–326.7, p=0.0001), diarrhea and/or vomiting (OR=16.07, 95% CI=3.22–80.14, p=0.0007), hospitalization (OR=23.10, 95% CI=2.37–226.31, p=0.0001), use of angiotensin blocking agents (OR=6.65, 95% CI=1.77–24.98, p=0.005) and non-steroidal anti-inflammatory drugs (OR=2.88, 95% CI=0.52–16.04, p=0.2251).

Conclusion: One-tenth of adult patients suffering from chikungunya were complicated by AKI. DM, CKD, diarrhea and/or vomiting, hospitalization and use of angiotensin blocking agents were significant risk factors for AKI.
Increased Chronic Kidney Disease Development and Progression in Diabetic Patients After Appendectomy: A Population Based Cohort Study

Chia-Chu Chang

Department of Internal Medicine, Division of Nephrology, Changhua city, Taiwan

Objective: To assess whether appendectomy increases the risk of chronic kidney disease (CKD).

Background: Appendectomy may impair the intestinal microbiota. Recent studies have shown that a dysbiotic gut increases the risk of cardiovascular disease and CKD. Therefore, we hypothesized that appendectomy would increase the risk of CKD.

Methods: This nationwide, population-based, propensity-score-matched cohort study included 10,383 patients who underwent appendectomy and 41,532 propensity-score-matched controls. Data were collected by the National Health Insurance Research Database of Taiwan from 2000 to 2012. We examined the associations between appendectomy and CKD and end-stage renal disease (ESRD).

Results: The incidence rates of CKD and ESRD were higher in the appendectomy group than in the control cohort (CKD: 6.52 vs. 5.93 per 1000 person-years, respectively; ESRD: 0.49 vs. 0.31 per 1000 person-years, respectively). Appendectomy patients also had a higher risk of developing CKD (adjusted hazard ratio [aHR] 1.13; 95% CI 1.01-1.26; P = 0.037) and ESRD (aHR 1.59; 95% CI 1.06-2.37; P = 0.024) than control group patients. Subgroup analysis showed that appendectomy patients with concomitant diabetes mellitus (aHR 2.08; P = 0.004) were at higher risk of incident ESRD than those without diabetes mellitus. The interaction effects of appendectomy and diabetes mellitus were significant for ESRD risk (P = 0.022); no interaction effect was found for CKD risk (P = 0.555).

Conclusions: Appendectomy increases the risk of developing CKD and ESRD, especially in diabetic patients. Physicians should pay close attention to renal function prognosis in appendectomy patients.
Background and Goal of Study:
Gastrointestinal disease in patients with Lupus Nephritis (LN) contributes to significant morbidity but is not well-described. Hence we examined the prevalence of gastrointestinal endoscopic pathologies in individuals with biopsy-proven LN.

Materials and Methods.
Single-center cross-sectional study of patients diagnosed with LN between 2009 and 2017 were included. Electronic endoscopic data prior to LN diagnosis until last follow up were reviewed for indications and findings.

Results and Discussion
One hundred and twenty-nine endoscopies were performed for 62 of 243 patients with LN (25%), among whom 35 patients had multiple endoscopies. The most common indication for endoscopy was anemia (55 procedures; 43%) followed by abdominal pain (35; 25%). The most common findings for gastroscopy (n=73) was gastritis (46; 63%), followed by duodenitis (10; 14%) and esophagitis (9; 12%); Colitis (9; 16%) and Diverticulosis (5, 9%) were the most common findings for colonoscopy (n=56)

Conclusions
Mucosal inflammation was common among LN patients who had gastrointestinal endoscopy for anemia or abdominal pain, possibly due to the underlying systemic inflammatory condition, medications such as glucocorticosteroids or mycophenolate mofetil or even infective complications of immune suppressive therapy.
Factors Associated with Low Trabecular Bone Scores in Patients with End-Stage Renal Disease

Dong Ryul KIM

Division of Nephrology, Department of Internal Medicine, Incheon, South Korea

Backgrounds: The trabecular bone score (TBS) is a textural index that indirectly assesses bone trabecular microarchitecture using lumbar spine images obtained by dual energy x-ray absorptiometry (DXA). This study compared the TBS of patients with end-stage renal disease (ESRD) with that of matched controls to identify risk factors associated with a low TBS.

Methods: TBS and bone mineral density (BMD) were assessed in ESRD patients (n=76) and age- and sex-matched control subjects (n=76) using DXA. The TBS of both groups was then compared, and risk factors associated with a low TBS (defined as ≤1.31) were evaluated.

Results: The mean TBS in the ESRD group was significantly lower than that in the control group (1.34±0.15 vs. 1.43±0.08, respectively; p<0.001). More subjects in the ESRD group had a low TBS (34.2% (ESRD) vs. 5.3% (controls); p<0.001). The TBS was negatively correlated with age, alkaline phosphatase and C-reactive protein levels, and dialysis vintage, and positively correlated with BMD at the lumbar spine, femoral neck, and hip. Multivariate analysis identified lower estimated glomerular filtration rate and increased C-reactive protein levels as being significantly associated with a low TBS.

Conclusion: ESRD patients had abnormal bone microarchitecture (as assessed by the TBS). The TBS was positively correlated with BMD. Renal function and inflammatory marker levels were independently associated with a low TBS. Thus, TBS may be a useful clinical tool for assessing poor bone quality in ESRD patients.
Increased Monocyte-to-High-Density Lipoprotein Ratio is Associated with Recurrent Vascular Access Stenosis

Dong Ryul KIM
Division of Nephrology, Department of Internal Medicine, Incheon, South Korea

Background: Previous studies indicate that increased monocyte count and decreased HDL cholesterol levels are associated with chronic kidney disease, and increased risk for cardiovascular diseases, indicating its possible role in pro-inflammatory, pro-oxidant states. We investigated the clinical significance of M/H ratio in predicting recurrent vascular access stenosis after angioplasty in hemodialysis patients.

Methods: M/H ratio at access creation and prior to angioplasty was measured in 150 hemodialysis patients in Incheon St. Mary’s hospital from July, 2006 to September, 2017. The impact of M/H ratio was evaluated retrospectively by using Kaplan-Meier, Cox regression, and ROC curve analyses.

Results: The patient group comprised of 67% male and 58% diabetes, aged 62±14 years old (n=150). Baseline M/H ratio at access creation was not different between those with vascular access stenosis (n=71) and those without stenosis (n=79). There was no difference in baseline M/H ratios between those with recurrent stenosis (n=33) and those without recurrence (n=38) (9.98 vs. 11.4, p = 0.24). However, pre-angioplasty M/H ratio increased when compared to that of baseline (10.75 vs. 17.95, p < 0.001). Delta M/H ratio, difference between baseline and pre-angioplasty ratios was calculated. Mean delta M/H ratio was 1.9. Increased delta M/H ratio (delta M/H ratio 1.9) was associated with recurrent stenosis (HR 4.16, CI 1.43-12.12, p = 0.009). Increased delta M/H ratio was predicting recurrent vascular access stenosis (AUC 74%, p = 0.001).

Conclusion: Increased delta M/H ratio may play a role in pro-inflammatory, pro-oxidant environment and predispose vascular access for recurrent stenosis after angioplasty.
Spectrum of Gastro-Endoscopic Findings in Lupus Nephritis Patients: A Retrospective Review

Apurva Thanju
Department of Renal Medicine, Singapore

Background and Goal of Study:
Gastrointestinal disease in patients with Lupus Nephritis (LN) contributes to significant morbidity but is not well-described. Hence we examined the prevalence of gastrointestinal endoscopic pathologies in individuals with biopsy-proven LN.

Materials and Methods.
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Results and Discussion
One hundred and twenty-nine endoscopies were performed for 62 of 243 patients with LN (25%), among whom 35 patients had multiple endoscopies.

<table>
<thead>
<tr>
<th>Patients Categorized on Number of Gastro-Endoscopies</th>
<th>Number of Patients (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients without gastro-endoscopies</td>
<td>181</td>
</tr>
<tr>
<td>Number of patients with 1 gastro-endoscopy</td>
<td>27</td>
</tr>
<tr>
<td>Number of patients with more than 1 gastro-endoscopy</td>
<td>35</td>
</tr>
<tr>
<td>Total Number of Patients</td>
<td>243</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indication for Gastro-Endoscopy</th>
<th>Number (N)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia</td>
<td>55</td>
<td>43%</td>
</tr>
<tr>
<td>Abdominal Pain</td>
<td>32</td>
<td>25%</td>
</tr>
<tr>
<td>Per Rectal Bleeding</td>
<td>9</td>
<td>7%</td>
</tr>
<tr>
<td>Loss of Appetite or Weight</td>
<td>11</td>
<td>9%</td>
</tr>
<tr>
<td>Melena</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Malignancy Work up</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Follow up</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>More than 1 Indication</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Screening</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>129</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The most common indication for endoscopy was anemia (55 procedures; 43%) followed by abdominal pain (32; 25%). The most common findings for gastroscopy (n=73) was gastritis (46; 63%), followed by duodenitis (10; 14%) and esophagitis (9; 12%); Colitis (9; 16%) and Diverticulosis (5, 9%) were the most common findings for colonoscopy (n=56)
Conclusions

Mucosal inflammation was common among LN patients who had gastrointestinal endoscopy for anemia or abdominal pain, possibly due to the underlying systemic inflammatory condition, medications such as glucocorticosteroids or mycophenolate mofetil or even infective complications of immune suppressive therapy.
One Side Effect to Consider When Using Fenofibrate: Rhabdomyolysis

Betul Erismis
Internal Medicine, Istanbul, Turkey

INTRODUCTION: Fenofibrate is a kind of fibric acid which is frequently used in the treatment of hypertriglyceridemia. Side effects such as gastrointestinal system complaints due to fenofibrate therapy, cholelithiasis, nausea, headache, liver dysfunctions, anxiety, rash, myositis and rarely rhabdomyolysis have been reported.

CASE: A 63-year-old male patient with known hypertension, diabetes mellitus and hyperlipidemia was admitted to emergency department with complaint of pain on bilateral lower limbs. It was learned that fenofibrate treatment started 1 month ago and complaints continued 1 week after treatment. Vitals were stable on physical examination and no pathological findings were found. In laboratory tests; creatinine kinase (CK) 41178 U/L, aspartate aminotransferase (AST) 615 U/L, alanine aminotransferase (ALT) 253 U/L, lactate dehydrogenase (LDH) 1069 U/L. In total urine analyse, 3 erythrocytes and 7 leucocytes were observed. Abdominal ultrasonography was performed and all organs in the abdomen were evaluated as normal. No neurological or gastroenterological conditions were considered in the patient. The patient was diagnosed with acute renal failure due to rhabdomyolysis after the use of fenofibrate. The biochemical tests performed 2 weeks after were completely normal.

RESULTS: Due to the potential side effects of statin and fibrate derivative drugs, it is vital to use with definite indications, to be aware of the side effects, to evaluate them in terms of rhabdomyolysis facilitating factors and to follow closely during their use.
Renal Replacement Therapy in Sub-Saharan Africa: A Systematic Review

Nancy Kasongo¹
School of Medicine, Ndola, Copperbelt, Zambia

Introduction
End-stage renal disease (ESRD) in sub-Saharan Africa is expected to rise due to an estimated increase in non-communicable diseases like hypertension. Many patients requiring life-saving therapy are in developing areas like sub-Saharan Africa, yet only 20% of patients on renal replacement therapy (RRT) globally are from developing areas. We conducted a systematic review to summarize survival outcomes and diagnostic modalities for ESRD in sub-Saharan Africa.

Methods
We searched PubMed and Scopus for studies in English published from inception until July 16, 2017. The search terms were in three broad categories: renal replacement therapy, ESRD and sub-Saharan Africa. We excluded studies outside of sub-Saharan Africa and studies not discussing diagnostics or RRT in ESRD. Findings were reported using PRISMA 2009 checklist.

Results
415 articles were retrieved of which 41 met the inclusion criteria. Patient population with ESRD in the studies was 19,402. The age distribution was from birth to 80 years. The diagnostic modalities for ESRD were ultrasound, biochemistry, dip stick urinalysis and renal biopsy as shown in fourteen articles. Dialysis was used in 65% and transplant in 11%. Of the 19,402 ESRD patients, 45% were reported to have died during the studies.

Interpretation
The survival outcome was poor, with death occurring in 45% of 19,402 patients. Most diagnoses of ESRD were made clinically; biopsy was markedly underutilized so the pathogenesis of causes was never known. There is a need to characterize and prevent causes of ESRD in addition to increasing utilization and research on RRT throughout sub-Saharan Africa.
Urticarial Vasculitis Presenting with Angioedema

Aysun ISIKLAR

Department of Internal Medicine, Istanbul, Istanbul, Turkey

73 years old female patient has frequently visited emergency department since one year because of recurrent swelling of her tongue and lips. She was given iv corticosteroids and antihistamines at each visit, and she was referred to a immunologist. Immunological evaluation didn’t reveal any pathological finding, and variety of antihistamines were prescribed for treatment. Specific immunoglobulins were between normal ranges, however prick test couldn’t be performed because the patient were unable to withdraw her medications. Angioedema flares persisted under treatment, thereupon asomalizumab 150 mg per month was prescribed by immunologist. Atrial fibrillation was occured after second course of the drug as adverse effect so patient had to withdraw this medication. 1 month ago urticarial lesions were detected in physical evaluation so that skin patch test was applied which was ended up negative. Acute phase reactans like erithrocyte sedimentation rate and crp, also IgE,d-dimer, fibrinogen and pro-bnp increased over normal ranges. C1 esterase was negative. Skin lesions persisted more than 24 hours, therefore the patient underwent skin biopsy. Methylprednisolon 20 mg daily was initiated after skin biopsy. In the following days urticarial lesions resolved and laboratory findings decreased significantly so that patient’s antihistamines were reduced gradually. The skin biopsy was reported as urticarial vasculitis. We report a case diagnosed urticarial vasculitis that manifested as angioedema attack initially.
Vision Impairment After Iron Chelating Agent in Peritoneal Dialysis Patient

Chi-Feng Huang

Nephrology, New Taipei City, Taiwan

A 53-year old lady has the history of ESRD under CAPD therapy for 6 years. She had underlying hypertension history under oral medication. She was admitted to the ward for iron chelating agent due to high Ferritin level (3600.40 ng/ml). We prescribed Deferoxamine 1 G IVD for 24 hours for 5 days. On the fifth day, she claimed about vision problem which was central halo pattern vision loss. The ophthalmologist was consulted, who diagnosed Macula edema which was related to Deferoxamine. We stopped immediately the medication. After stopping the medication, her vision was gradually improved. Although we reduced the dose of Iron chelating agent. But the side effect of Iron chelating agent should be kept in mind and detected as early as possible by asking the patient any vision problem after start using Deferoxamine. This case taught that we should be careful to detect the vision problem, eye examination before the medication for baseline, and follow up care.
Comparison of Charcoal Hemoperfusion and High-Efficiency Hemodialysis in Carbamazepine Intoxication: A Case Report

Sibel Yucel Kocak
Nephrology, Istanbul / TURKEY, Istanbul, Turkey

INTRODUCTION: Carbamazepine is a drug used in the treatment of neurological and psychiatric disorders. Carbamazepine intoxication is a condition that can result in coma, hemodynamic instability and death. Serum carbamazepine level should be kept between 4-12 μg / ml. We aimed to compare two hemodialysis modalities in carbamazepine intoxication.

CASE 1: The treatment of carbamazepine due to anxiety disorder, the patient was admitted to the emergency department with complaints of dizziness and blurred vision. Vitals were stable. GCS was 15. Laboratory tests were normal. Serum carbamazepine level was 56 μg / ml. The carbamazepine level was 15.6 μg / ml after charcoal hemoperfusion (Adsorba 150 C) for 3 hours. The patient was discharged.

CASE 2: The patient was admitted to the emergency room with blurred consciousness. It was learned that the patient used carbamazepine for suicide. Vitals were stable. Laboratory tests were normal. The carbamazepine level was 33 μg / ml. The carbamazepine level was 14.86 μg / ml after high-efficiency hemodialysis with high-flux membrane for 4 hours, the patient was followed by intensive care unit.

DISCUSSION: In these cases serum carbamazepine levels decreased of 73% was seen in patients receiving charcoal hemoperfusion and 57% in the patients receiving high-efficiency hemodialysis. Charcoal hemoperfusion is the gold standard treatment.

Figure 1: Graph showing serum carbamazepine levels before and after charcoal hemoperfusion and high-efficiency hemodialysis
Malposition Of Hemodialysis Catheter Into The Hepatic Veins: Case Report

Sibel Yucel Kocak

Nephrology, Istanbul /TURKEY, Istanbul, Turkey

Introduction: Malposition of a central venous catheter is a rare complication, requires appropriate management. Our patient had a permanent catheter and was extending towards the middle hepatic vein with the tip leaning into parenchyma.

Case: A 44-year-old female hemodialysis patient for 9 years, was admitted to clinic with abdominal pain and shortness of breath. Her catheter is a permanent, dual-lumen, cuffed, (cuff to tip 28 cm) was inserted through the right external jugular vein in another medical center 3 months ago. The patient was hemodynamically stable during the dialysis sessions. Chest X-ray (Figure 1) and a thoracic CT (Figure 2) scan were performed consecutively. Catheter was founded inserted through the right jugular vein and had extended until the inferior vena cava-middle hepatic vein trace. The distal tip of the catheter ended toward middle hepatic vein. The catheter was removed and permanent, dual-lumen, cuffed catheter (cuff to tip 19 cm) was inserted in the right femoral vein. And the symptoms were resolved.

Conclusions: Permanent central vein catheter is a choice for hemodialysis vascular access. Serious complications like malposition can be seen. Shorter catheters may lead to recirculation, longer catheters may cause atrial perforation. Catheter malpositions can be detected on chest X-rays or fluoroscopic evaluations. Catheter malposition ending in the hepatic vein as in our case has only been reported in two-case. While catheter malposition may lead to fatal outcomes, it may also cause ineffective dialysis. So it is very important to obtain chest X-rays to detect catheter malposition.
Figure 1: The permanent catheter inserted through the right jugular vein is observed to have extended towards the right upper quadrant.
Figure 2: Sagittal oblique reformatted images of the non contrasted CT scan. The catheter in the jugular vein extends towards the inferior vena cava and into the hepatic vein.
Aysun ISIKLAR

Department of internal medicine, Istanbul, Istanbul, Turkey

A 53-years old man presented to a healthcare facility with fatigue and neck pain. In the history, it was found that the patient frequently used non-steroidal anti-inflammatory drugs over 2 months and that he had diabetes mellitus over 5 years managed by oral anti-diabetic agents. In physical examination, there was pallor at face and conjunctiva and some lymphadenopathies at inguinal region as largest being 2x2 cm in size. Laboratory evaluations were as follows: creatinine 6.1 mg/dL, uric acid, 17 mg/dL; Ca, 12 mg/dL; ESR, 78 mm/h; Hb, 9.09. The patient had proteinuria of 22 g and β2-microglobulin of 16 mg/dL in 24-hours urine sample. Substantial monoclonal free lambda excretion was observed in urine immunoelectrophoresis. Radiological evaluations revealed diffuse lytic lesions in bones. The histopathological examination of lymph nodes and bone marrow was reported as plasmablastic lymphoma, anaplastic myeloma (CD138+, CD56+, CD79+, CD20-, CD30-, strong positive lambda, weak positive kappa, and Ki, %67-80 positive). A renal biopsy revealed no glomerular or interstitial pathology while tubular atrophy and tubular casts were detected. In immunofluorescence evaluation, positive staining was detected in secretions at lumens of kappa and lambda tubules. Immunofluorescence evaluation was reported as bx myeloma (cast) nephropathy. Patient was discharged by scheduling hemodialysis (3 days per week). The patient presented with acute onset pain and weakness at both legs. CT scan revealed a mass lesion obstructing spinal channel at C6-T1 level. The patient underwent emergent surgery and referred to hematology department for further evaluation of MM.
Introduction
Renal transplant recipients are at increased risk of developing malignancies. Risk is associated with duration of pre-transplant dialysis, type and duration of immunosuppression and oncogenic viruses.

Skin cancers, especially basal and squamous cell carcinomas are the most commonly reported. Trichilemmal carcinoma is a rare cutaneous tumour with only 3 reported cases in renal transplant recipients.

Clinical case
A 48 year old Caucasian man developed end stage renal disease at age 6 secondary to haemolytic uraemic syndrome. He received his first renal transplant at age 6 years and his second transplant at age 20 years. The immunosuppressant regimens used over the life of his grafts included cyclosporine, azathioprine, mycophenolate mofetil and prednisone.

At age 47 he presented with a fungating right shoulder mass. An excisional biopsy showed a nodular exophytic tumour and histology confirmed an ulcerated invasive trichilemmal carcinoma.

The following year, he presented with dysphagia. On gastro-duodenoscopy, a malignant stricture was observed and biopsy revealed poorly differentiated invasive squamous cell carcinoma. A stent was placed to relieve the dysphagia. The patient unfortunately demised before any further oncological workup or management could be initiated.

Conclusion
This is only the fourth reported case of trichilemmal malignancy in a renal transplant patient. The development of two distinct malignancies illustrates the potential morbidity and mortality associated with long term renal transplantation. It also highlights the importance of screening and tailoring immunosuppressive regimens. No link between the two malignancies was found.
Background: Patients from Northern KwaZulu-Natal often present to the internal medicine unit with severe renal failure requiring renal replacement therapy (RRT) urgently. Acute peritoneal dialysis (PD) through a rigid catheter is used to stabilise these patients.

Objectives: To determine the outcome of patients who underwent acute peritoneal dialysis with a rigid catheter. To explore the indications for dialysis as well as the number of sessions required to correct the metabolic abnormalities found on admission.

Method: Patients who underwent acute PD with a rigid catheter between February 2017 and December 2017 were included in the study. Patient files, discharge summaries and mortality reports were reviewed retrospectively. Data were collected and analysed on Microsoft Excel®.

Results: A total of 17 patients received peritoneal dialysis through a rigid catheter. The commonest indication for RRT was uraemic encephalopathy (7/17). The average number of cycles of PD required to correct the metabolic abnormalities was 68 cycles. 76% (13/17) were discharged from the hospital after acute PD. Two patients no longer required further RRT, two went on to receive chronic ambulatory PD, four patients no longer required urgent dialysis after the initial PD and could be worked up for the chronic RRT programme. Five patients were excluded from the chronic RRT programme and four patients demised while on PD. Two (2/17) patients developed secondary peritonitis.

Conclusion: In a resource limited setting, the treatment of severe renal failure with acute PD through a rigid catheter is a suitable alternative to haemodialysis and PD through a flexible catheter.
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Conclusion: In a resource limited setting, the treatment of severe renal failure with acute PD though a rigid catheter is a suitable alternative to haemodialysis and PD through a flexible catheter.
The Discovery Health Kidney Care Program

ERROL GOTTLICH
Health Executive, Sandton, Gauteng, South Africa

Over the last 12 years the KidneyCare program has been matured so that it provides significant clinical data to patients, treating doctors and chronic dialysis providers in order to guide targeted clinical improvement interventions.

The main aims of the program are to

- Improve the quality of life for patients on chronic dialysis and reduce additional costs incurred caused by repeat hospital admissions and avoidable complications in care.
- Measure and report on the comprehensive management of the patient to institute improvement of care programs.
- To provide educational material to patients via an educational booklet.
- Ensure joint participation by patients, doctors and dialysis care providers to improving quality of care.

Extensive clinical and pathology data is collected on all chronic dialysis patients yearly. Data analysis and reporting follow. Over 5000 individualized confidential reports are distributed. These reports concentrate on demonstrating process and outcome measures concentrating on where patients deviate from international guidelines. These reports guide all involved; funder, patient, doctor and chronic dialysis provider, to identify high-risk patients and to concentrate their efforts in improving quality of care on a targeted basis.

The reports for doctors and chronic dialysis providers also provide comparative scores versus the national averages in order to create benchmark knowledge for providers of care.

The program now provides data support for the value based contract between the providers of chronic dialysis and Discovery. This contract promotes improved remuneration for chronic dialysis where improved clinical outcomes are achieved.
More to the Story: Kidney Disease in a Long-Standing Diabetic Not Just Diabetic Nephropathy

Tapuwa Mupfumira

*Internal Medicine, Albuquerque, New Mexico, USA*

We describe an atypical presentation of Post-Infectious Glomerulonephritis (PIGN), diagnosed by renal biopsy, in a patient with previously undiagnosed diabetic nephropathy.

A male patient with a long history of poorly controlled T2DM came complaining of four weeks of dyspnea on exertion and fatigue, followed by generalized anasarca, decreased urinary output, and dark-colored urine. Family history was only significant for diabetes. The patient reported a self-resolving flu-like illness two months prior to the onset of presenting symptoms.

Examination revealed a blood pressure of 180/126, periorbital edema, tense abdomen, and pitting edema of lower limbs. On investigation, he was moderately anemic with elevated WBCs, serum creatinine 4.12 mg/dL, serum albumin 0.6 gm/dL, hypo-complementemia, and increased ASO titer. Urinalysis showed nephrotic range proteinuria. Dysmorphic RBCs were noted on urinary sediment. Ultrasound showed normal sized kidneys.

Presenting clinical features were not explained by diabetic nephropathy alone, so a kidney biopsy was performed. It revealed characteristics suggestive of post-infectious glomerulonephritis superimposed on chronic severe diabetic nephropathy.

The patient was treated conservatively. No hemodialysis or immunosuppression were required. He was discharged with 4.13 mg/dL creatinine level with plans for close follow-up with nephrology.

This case highlights the importance of considering other causes of renal dysfunction in patients with long-standing DM when presentation is not typical for diabetic nephropathy alone.

PIGN is the most common secondary pathology found with diabetic nephropathy on kidney biopsy. Diagnosis of the etiology of glomerulonephritis (in this case post-infectious) in patients with long-standing diabetes is needed to avoid an erroneous diagnosis.
A rare complication of tertiary hyperparathyroidism in a patient on haemodialysis

Jarrod Zamparini

Internal Medicine, Johannesburg, Gauteng, South Africa

Introduction
Chronic Kidney Disease Metabolic Bone Disease (CKD-MBD) is a well described complication of CKD resulting in abnormalities of bone homeostasis and the metabolism of parathyroid hormone, calcium, phosphorus and vitamin D homeostasis. We present a case of brown tumour of hyperparathyroidism in a female patient on haemodialysis for 8 years.

Clinical Case
A 42-year-old female patient known with end stage renal disease (ESRD) on haemodialysis complained of progressive right-sided maxillary gingival swelling. This swelling progressed rapidly to the point where a well-defined mass had developed which perforated through to the hard palate and interrupted the patient’s dentition. The mass was tender on palpation and bony hard. Laboratory tests revealed the patient to have tertiary hyperparathyroidism (PTH = 108.7pmol/L [1.6 – 6.9pmol/L] and corrected calcium = 2.83mmol/L [2.15-2.50mmol/L]) with an elevated alkaline phosphatase (446u/L; [42 -98 pmol/L]). Computed tomography (CT) scanning of the patient’s head and neck revealed a solid mass arising from the right maxilla. A biopsy of the mass showed numerous multinucleated osteoclastic giant cells with areas of interstitial haemorrhage and haemosiderin deposition. The histological diagnosis of a brown tumour of hyperparathyroidism was made.

Discussion
Brown tumours are a complication of the osteitis fibrosis cystica seen in hyperparathyroidism. Excess osteoclast activity leads to collections of osteoclasts, fibrous tissue and poorly mineralized woven bone with subsequent haemosiderin deposition into this matrix leading to the brown colouration of the mass. These tumours are not malignant and are not commonly seen due to the improved and early management of hyperparathyroidism.
Aliskiren, renin inhibitor, has been shown to exert cardioprotective, renoprotective and anti-atherosclerotic effects independent of its blood pressure (BP) lowering activity. Clinical use of aliskiren is limited, however, by short lifetime of this drug. Therefore, we aimed to determine the effect of nanoparticle-loaded aliskiren, with gradually realized drug, on BP and structural alterations of the heart and aorta developed due to hypertension.

12-week-old male SHRs were divided to the untreated group, group treated with powdered aliskiren or nanoparticle-loaded aliskiren (25mg/kg per day) and group treated with nanoparticles only for 3 weeks by gavage. BP was measured by tail-cuff plethysmography. Collagen and elastin contents were determined by picro-sirius red staining in both heart and aorta. Wall thickness (WT), inner diameter (ID) and cross sectional area (CSA) were determined in the aorta.

At the end of experiment, BP was lower in both powdered aliskiren and nanoparticle-loaded aliskiren groups with more pronounced effect in the second one. Moreover, nanoparticle-loaded aliskiren was able to decrease collagen content (by 11%) and CSA (by 25%) in comparison to the powdered aliskiren group, while it had no significant effect on the similar parameters in the heart. There were no significant changes in elastin content, WT and ID among aliskiren groups and control group. Polymeric nanoparticles, however, increased collagen and elastin contents and WT of the aorta.

In conclusion, nanoparticle-loaded aliskiren seems to be promising drug in large vessels protection, more suitable polymeric nanoparticles, however, are needed for better tissue protection.

ABSTRACT

INTRODUCTION/h2
Continuous ambulatory peritoneal dialysis (CAPD) is a cost effective home dialysis technique, that is easy to learn and does not require complex equipment, thus, is well-suited in areas with distant or limited dialysis access. This study aimed to evaluate the effect of HIV-seropositive status on CAPD associated technique survival, mortality and peritonitis rates in end-stage renal failure (ESRF) management.

METHODS/h2
The study included 70 HIV-negative and 70 HIV-positive consecutive patients with newly inserted Tenckhoff catheters between September 2012 and February 2015. They were prospectively followed up monthly for 18 months, and thereafter by chart review up to 31 January 2018. Study outcomes of death, technique failure, and peritonitis events were observed during the follow-up period (136.8 and 90.4 person-years for HIV-negative and HIV-positive cohorts, respectively).

RESULTS/h2
Technique survival at 1, 2, and 4 years was 77.1%, 65.3% and 48.6%, respectively, for HIV-negative cohort and 74.6%, 58.2% and 35.4%, respectively, for HIV-positive cohort (P=0.483) while patient survival was 79.0%, 68.2% and 50.5%, respectively, (HIV-negative) and 61.6%, 44.7% and 27.2%, respectively, (HIV-positive) (P=0.011). There was a four-fold significant increased fungal peritonitis rate among the HIV-positive cohort compared to the HIV-negative cohort (0.090 vs 0.022 episodes/person-years; rate ratio [RR], 4.09; CI, 1.09-15.43; P=0.024). The fungal peritonitis-free survival at 1, 2, and 4 years was 96%, 96% and 92%, respectively, for HIV-negative cohort, and 89.6%, 81.5% and 57.3%, respectively, for the HIV-positive cohort (P=0.024).

CONCLUSION
HIV seropositive ESRF patients managed with CAPD may be associated with increased mortality risk and fungal peritonitis rate.
Glucose transporter type 1 deficiency syndrome (GLUT1-DS) was first described in 1991 as a severe, sporadic clinical condition beginning in infancy, later shown to be the result of de novo mutations in SLC2A1.

Subsequently, a variety of clinical manifestations including seizures, developmental delay, and ataxia often with microcephaly were described. No specific electroencephalogram (EEG) pattern has been identified.

A lumbar puncture with hypoglycorrhachia, in particular low cerebrospinal fluid (CSF) glucose level with respect to the concomitant glycaemia (CSF glucose/blood glucose ration 0.6). Molecular studies revealed a mutation in SLC2A1 gene in most patients. More than 100 different types of mutations and deletions of this gene have been found to date in GLUT1 deficiency patients.

The diagnosis of GLUT1-DS is often made late, much later than the onset of clinical manifestations such as seizures and mental retardation, for this reason, seizures are often treated with a number of antiepileptic medication, however, in GLUT1-DS seizures are a typically refractory to medical treatment.

The current standard of care treatment is a ketogenic diet (KD) which provides an alternative source of fuel for the brain in order to support both brain growth and the normal neuronal function thereby controlling symptoms.
Multiplex families with Epilepsy: A Clinical and Molecular Genetic study

Zaid Afawi

Tel Aviv University, Tel-Aviv, Israel

Purpose: Discovering the genetic basis of the common epilepsies is a major priority in epilepsy research. In order to enrich for genetic causation, yet avoiding the selection of only large Mendelian families, we studied the clinical and inheritance patterns of multiplex families in Israel; an ethnically heterogeneous but geographically small country with high quality medical services.

Methods: Following the referral of families with two or more individuals with epilepsy to the project, individuals were classified into epilepsy syndromes. Familial epilepsy classification was possible following the successful classification of at least two family members. Pedigrees were analysed and molecular genetic studies were performed as appropriate.

Results: 211 families were studied. We successfully classified 169 families into broad familial epilepsy syndrome groups; 69 Generalized, 22 Focal, 24 GEFS+, 32 Special and 29 Mixed. 42 families remained unclassified.

Arab families made up 25% of our cohort with the remaining families Jewish (44% Sephardic, 23% Ashkenazi, 8% mixed Jewish). Arab families were disproportionately represented in our Special familial syndrome group and were more likely to be consanguineous.

Molecular lesions were identified in 47/211 families (22%). The majority were found in established epilepsy genes (e.g., SCN1A, KCNQ2, SLC2A1) but in ten families, this cohort contributed to novel genetic discoveries (e.g., KCNT1, PCDH19, TBC1D24). Unexpected findings include the discoveries of dominant SCN1A mutations in two families with focal epilepsy and a homozygous LAMC3 mutation in a consanguineous family where the predominant phenotype was epilepsy with myoclonic-atactic seizures; these observations expand the phenotypic spectrum of these epilepsy genes.

Conclusion: 80% of families were successfully classified with causative mutations identified in 22%. The successful characterization of familial electro-clinical and inheritance
There are only very few studies regarding etiological and clinic-radiological profile of MoyaMoya Syndrome from India. It is a single centre longitudinal study to assess clinico-radiological profile, etiological identification and outcome after 6 month of follow up of 41 patients of MoyaMoya Vasculopathy. Among 41 patients with MoyaMoya Vasculopathy, [Male: Female - 15:26, 69.7% adult (M:F - 5:17), 30.3% pediatrics (M:F - 5:17)], had wide spectrum of presentation, 25 patients had weakness of limbs (61%), 8 had headache (19.5%), TIA in 2 (4.9%), seizure in 2 (4.9%), behavioural abnormality in 3 (7.3%) and language disorder and movement disorder in 1 (2.4%) each as presenting complaint. Subtle mental changes (in 7 patients) prior to the index event was seen, could clue in an early diagnosis of MoyaMoya. Fever preceding to index event, without infective foci was seen in 6 (14.6%) patients, might hint to inflammatory etiology. Brain imaging revealed infarct in 26 (63.4%) hemorrhage in 6 (14.6%) with IVH in 4 (9.6%) and normal study in 1 (2.4%). Brain atrophy without any evidence of infarct or hemorrhage in 8 (19.5%), all in pediatric group, such profile should prompt MoyaMoya as possibility. Posterior circulation was affected in 15 patients (36.6%). No familial associations. 2 had atherosclerosis as an identifiable etiology, 1 with Down’s Syndrome, 2 with Beta-Thalassemia Major. Acute neuro-deficit in background of hemoglobinopathy must be distinguished between thromboembolic event and MoyaMoya due to difference in management. 4 patient underwent revascularization surgery, 37 were treated conservatively. 4 patients had re-infarction/repeat symptomatic ICH in this 6 month period. 1 from Surgical group and 3 from conservative group (1 mortality in each group). Conservative management could be reasonable in resource poor communities.
Clinical Significance of Lipid Profile in Young Patients with Acute Ischemic Stroke

Yulia Venevtseva
Medical Institute, Tula, Russia

Objective. The study aimed to examine clinical significance of lipid profile in patients with nonfatal acute ischemic stroke or transient ischemic attack.

Methods. 159 consecutive patients (pts) aged 55 yrs admitted in 2012-2014 were included. According to carotid ultrasound results and admission triglyceride (TG) level all pts were divided into 4 groups: 55 pts (mean age (M±SD) 48.8±4.8 yrs) had hyperTG (1.7 mmol/L) and obstructive atherosclerotic plaque in carotid artery, 49 pts (49.2±4.8 yrs) had normal TG level and obstructive atherosclerotic plaque, 23 pts (43.9±3.5 yrs) had elevated TG without atherosclerotic plaques and 32 pts (45.1±7.0 yrs) had both normal TG and intima-media thickness.

Results. 34% of pts were smokers. More often smoking status was present in the group having carotid stenosis and normal TG (42.9%) than in those without stenosis and normal TG (21.7%; p<0.05). Diabetes or glucose intolerance was more often seen in carotid stenosis and hyperTG group (32.7%) than in those without carotid plaque and normal TG (9.4%). Left side lesion was more often registered in pts with carotid stenosis (38.2 and 34.7%) than in pts with clear arteries and hyperTG (13%).

Degree of neurological and functional deficits at discharge was negatively related to total cholesterol and TG level (r= -0.20) and positively to high-density lipoprotein. The right lesion pts had greater neurological deficit than left side ones.

Conclusion. High admission cholesterol and triglycerides may be associated with better neurological outcome after ischemic stroke in patients aged
Late Onset Mitochondrial Myopathy Presenting with Progressive Dysphagia

Liu Yin Eow
Department of General Medicine, Singapore

Background:
Mitochondrial diseases are polymorphic entities that can affect multiple organs with varying severity. Skeletal muscle involvement is frequent, but adult onset mitochondrial myopathy appears to be rare.

Case report:
A 68 years old man with history of hypertension, hyperlipidemia and ischaemic cardiomyopathy, presented with progressive dysphagia for one year associated with weight loss. He had unremarkable family history and drug history.

Neurological examination was normal except limb muscle wasting. Nil pigmentary retinopathy was detected. He subsequently developed dysphonia secondary to left vocal cord palsy.

Oesophagogastroduodenoscopy showed erosive gastritis. No tumour or obstructive lesion was detected on CT scan of neck and thorax. Video fluoroscopy showed global oropharyngeal dysphagia. MRI brain showed chronic microvascular ischemic changes.

No evidence of neuropathic process was noted on nerve conduction study. Electromyography showed non-irritable proximal myopathy. No significant abnormalities were detected on blood and urine investigations. He had normal serum creatine kinase, thyroid function test, vitamin B12, folate, serum lactate, and cortisol. Serum Acetylcholine receptor antibody and anti MUSK antibody were negative. Left biceps muscle biopsy showed three COX-negative, SDH-positive fibres, and approximately five red-staining fibres. These findings were in keeping with diagnosis of mitochondrial myopathy after exclusion of other aetiologies.

The patient was started on a combination of Co-enzyme Q10, Vitamin B1 / B6 / B12 / C and Levocarnitine.

Conclusion:
It is important to consider mitochondrial disorder in non-specific myopathies starting in adult life. Muscle biopsy can be diagnostic for mitochondrial myopathy in challenging cases without clear clinical evidence.
The Efficacy of an Online Learning Tool in Improving EEG Analysis and Interpretation Skills of Technologists, Neurology Registrars and Neurologists

Melody Asukile¹

Division of Neurology, Department of Medicine, Cape Town, Western Cape, South Africa

Introduction

Web-based, distance learning programs may provide effective electroencephalogram (EEG) training in resource-poor settings. EEGonline is an interactive, web-based, 6-month multi-modality, learning program designed to teach basic principles and clinical application of EEG. This study aimed to determine the effectiveness of EEGonline in improving EEG analysis and interpretation skills.

Methods

Fifty-three participants (19 neurologists, 28 neurology residents and 6 medical technologists) from 13 mostly African countries registered on EEGonline from 19th June to 17th December 2017, were enrolled. Pre- and Post-course multiple-choice question (MCQ) test results and EEGonline user logs were analysed. Differences in pre- and post-test performance were correlated with quantified exposure to various EEGonline learning modalities. Participants’ impressions of EEGonline efficacy and usefulness were assessed through Pre- and Post-course surveys.

Preliminary Results

Forty-two participants attempted both pre- and post-course tests. Mean scores were 49.0% and 66.8% respectively (t=7.2156, df=41, p<0.0001) [Figure 1]. Median percentage improvement was 37.8% (Range 35.5 to 262.5) with 77% of participants showing improvement. Post-course test performance was better in participants accessing interactive EEG-activities versus didactic lecture-notes. Further analysis will correlate post-course test performance with overall use of EEGonline and its various learning modalities.

Over 95% of post-course survey respondents felt their EEG analysis skills had improved, that EEGonline was a useful learning tool (Figures 2 and 3) and should be recommended as part of EEG training curricula.
Figure 1: Mean pre-course and post-course test scores for n=42 participants who completed both tests.
EEGonline has improved my EEG analysis and interpretation skills:

Figure 2: All post-course survey respondents reported that EEGonline had improved their EEG analysis skills (n=40)
EEGonline is a useful learning tool:

**Figure 3**: 97% of post-course survey respondents reported that EEGonline was a useful learning tool (n=40)

**Conclusion**

Preliminary results confirm that EEGonline, a web-based, multi-modality learning tool is effective in improving EEG analysis and interpretation skills and may be useful in resource-poor settings.
Can Myasthenia Gravis manifest as an Asymmetric Form? A Case Report and Review of the Literature

Clara Louise Vianna¹
Internal Medicine, Petropolis, Rio de Janeiro, Brazil

Background: Myasthenia Gravis (MG) is an uncommon autoimmune disease mediated by antibodies that attack the postsynaptic acetylcholine receptors (AchR) at the neuromuscular junction (NMJ), causing fluctuating muscle weakness, aggravated with use and relieved with rest. It can manifest as an ocular or generalized form and although there may have an occurrence in atypical muscle groups, in the generalized form it maintains the symmetry of the affected region.

Case report: A 32-year-old woman with a diagnosis of MG based on clinical findings, eletroneuromyography and brain Magnetic resonance imaging (MRI), was admitted to our hospital in September 2017 with dysphagia, dysphonia, diplopia and intense weakness, associated with a two-day viral gastroenteritis. Physical examination revealed a reduction of force, markedly greater in the left arm and leg. Autoantibody dosing against AchR was elevated and computerized tomography scan of the thorax revealed a thymic remnant. After 7 days of the reintroduction of pyridostigmine and human immunoglobulin infusion, the patient developed complete resolution of symptoms, being discharged from the hospital.

Discussion: Although our patient presented all the diagnostic criteria of MG, the exuberant asymmetry of force between body sides was atypical, since the autoimmune character against JNM receptors entails bilateral and symmetric force reduction. The normal brain MRI was essential to rule out another associated etiology.

Conclusion: The asymmetry of force presented in previous history and admission was an unusual and unexpected presentation for generalized MG, which characterizes an atypical presentation, not yet described in the literature.
Antiphospholipid Syndrome and Non-vascular Cerebral Edema: A Case Report and Review of the Literature

Clara Louise Vianna

Internal Medicine, Petropolis, Rio de Janeiro, Brazil

**Background:** The Antiphospholipid Syndrome (APS) can be characterized by arterious or venous thromboembolic events related to the presence of antiphospholipid antibodies (aPL). Therefore, vascular neurological events can be validated with the pathogenesis of hypercoagulability. However, pathological triggers that underline the non-vascular occurrences in the central nervous system (CNS) remain obscure.

**Case report:** A 47-year-old women, with systemic arterial hypertension, was admitted to our hospital on March 2018 with blurred vision, vertigo and intense headaches. A magnetic resonance imaging (MRI) demonstrated diffuse cerebral edema, herniation of cerebellar tonsils and absence of thrombosis in the venous sinus, allied to a fundoscopy that showed bilateral papilledema. Both findings corroborated with the diagnosis of pseudo-brain tumor. In addition, due to a previous report of sudden dyspnea associated with an echocardiogram that demonstrated severe triscupid insufficiency, the hypothesis of chronic thromboembolism and thrombophilia were suggested. Pulmonary scintigraphy and positive lupus anticoagulant corroborated the theories. Acetazolamide and full anticoagulation with warfarin were used as treatment.

**Discussion:** It is well established that APS is associated with hypercoagulability and CNS complications can be due to thromboembolic events, however it is presumed that aPL can bind directly to neural tissue and modulate its functions. As our patient did not show cerebral changes consistent with ischemia or vasculitis, the primary role for immune factors causing neurological disease can be postulated.

**Conclusion:** Some cases of non-thromboembolic CNS events have been reported in literature, still there are no studies indicating the prevalence between intracranial hypertension and immune-mediated CNS lesions in APS.
Cerebrospinal Fluid Hypotension Syndrome: Case Report

Joao Ferreira
Servico de Medicina 2 - Setor A, Portugal

In 1939 Georg Schaltenbrand described the spontaneous occurrence of a syndrome associating orthostatic headache to diverse neurological symptoms resulting from low cerebrospinal fluid (CSF) opening pressure, designating it as “aliquorrhea”. CSF hypotension syndrome, a posterior and still inaccurate designation, has as its dominant etiopathogenic factor the loss of CSF volume, and remains underdiagnosed.

Woman, 46 years old, rural worker, with a history of latent hepatitis B and genital herpes. Admitted due to headache 2 weeks long, initially occipital and progressing to holocranial, intense, aggravating with orthostatism and Valsalva maneuver, ameliorating with decubitus, without fever, nausea, vomiting, or other symptoms. On examination, right VI cranial nerve with diplopia on dextroversion. Cranial CT Angiography did not show any changes. Lumbar puncture was performed, with an output of clear CSF, with mild hyperproteinorrhaquia 55.1 (N 15-45). Head MRI revealed subdural and peridural collections, and pachymeningeal and cerebellar enhancement. After intravenous rehydration, analgesia and 0º decubitus rest, the patient’s headache remitted, the right ophthalmoparesis and diplopia improved. The diagnosis of CSF hypotension syndrome was admitted, and the patient was discharged with clinical and imaging follow-up planned for a Neurology appointment.

CSF hypotension syndrome is based on loss of CSF volume. It is caused in the majority of cases by spontaneous CSF fistulae, although, according to different studies, the exact leaking spot cannot be identified in 17% to 54% of cases. Clinical suspicion and early diagnosis may allow better awareness of its complex physiology and timely reversal of potentially severe neurological conditions.
Patient LII JUI HO a 70 year old marriage male, On September 6, 2006 , He was found a nodule 1 cm in diameter at the medial segment in right middle Lobe of lung. On June 14, 2007, Taipei Veterans General Hospital they found it also, after 3 Doctors discussion, they decided next Friday operation, when the chief of chest surgery back from USA. He drank electronic ionizing ground water 2000 ~ 3000 ml in vacuum-packed bags per day for five months.His bath room radon concentration was 9.5 pCi/L and his bed room radon in air was 9.2 pCi/L, the radon in water was 340 pCi/L, the radon In ionizing water for direct drinking was 34 pCi/L; there were hospitals detected and suspect lung mass, Tri-Service General Hospital perform 18F-FDG PET, the lung mass was neither glucose uptake nor growth. He brought the previous data and went back to TVGH, the operation cancelled. Patient had diabetes mellitus under control for decades,at beginning he took Euglucon for more than 30 years then changed to Amaryl 8mg QD without effect, the blood sugar over 300mg% for days, and changed to 12mg QD with good result but on year 2016, he developed hypoglycemia with fasting blood sugar=51mg%; now he received Glunormal 30mg QD, Trajenta F.C. 5mg QD and Norvasc 10mg QD from National Taiwan University Hospital, He had cataracts operations last year at Taipei city. More than 7500 lung cancer deaths per day estimated in China, the radon gas has been absence control. About 155,870 deaths from lung cancer in USA on year 2017.
Burden in Family Caregivers of Patients with Chronic Obstructive Pulmonary Disease

Rukiye Pinar Boluktas
Nursing, Istanbul, Turkey

The aim of study was to investigate burden and effecting factors among primary family caregivers for patients with Chronic Obstructive Pulmonary Disease (COPD). The study included 100 family members with a mean age of 47 who provided primary care for patients with COPD. Data were collected by the Zarit’s Burden Interview, the Medical Outcomes Study MOS 36-Item Short Form Health Survey (SF-36) and The Medical Research Council (MRC) Dyspnoea Scale. The most of caregivers were females and were patients’ children (46%) or spouse (28%); they had been providing care for 4.6 years and 15.7 hours per day; 79 of them were living together with patients. More than half of the caregivers (52%) had a health problem. Family caregivers’ burden mean score was 40.2 indicating that moderate to severe level of burden. The higher caregivers burden score was related to having children (p<0.05), having poor economic status (p<0.01), having bedridden patient (p<0.001), duration of time which spent for caregiving in a day (r=0.28), perceived poor health (P<0.05) and patients’ dyspnoea level (p<0.01). Mean scores for physical health or QOL and mental health or QOL in SF-36 were 52.3 and 45.3, respectively. The correlation between caregiver burden and PCS (r=0.53) and MCS (P=0.59) were strong. These findings increase our understanding about how family members perceive burden and effects of socio-demographic and patient-related variables on burden influencing the health and well-being of family caregivers. Helping family members to maintain and enhance a supportive environments may represent a useful means to reduce caregiver burden.
AIM:
New oral anticoagulants are known to be reasonable alternatives to vitamin K antagonists, which becomes a popular treatment strategy for pulmonary embolism.

METHODS:
Patients who had the diagnosis of pulmonary embolism between 2016 June and 2017 May in our clinic were evaluated retrospectively.

RESULTS:
There were 98 patients (50%-men, 50%-women) with the mean age of 61.70±16.63. Risk factor for pulmonary embolism was specified in epicrisis of 46% of the patients. The most frequent risk factor was malignancy (21.4%). Seventy-seven patients were followed during their anticoagulant therapy by our clinic.

There were warfarin: 57.1%, low-molecular-weight heparin (LMWH): 32.5 % and new oral anticoagulants: 10.4% as treatment. Half of the patients using warfarin could not reach therapeutic INR range of 2-3 after two months of the therapy. The decision was resuming coumadinization in 74% of them; 17.4% started to use LMWH. Only 8.6% of the patients stoped using warfarin and started to use new oral anticoagulants. There were side effects in 8.3% of all participants, including 2 gastrointestinal bleeding, 1 minor hemorrhagia, 1 cerebrovascular disease, 1 microscopic hematuria and 1 heparin-induced thrombocytopenia. All side effects were seen in patients using warfarin or LMWH. There were no complications in patients using new oral anticoagulants.

DISCUSSION:
New oral anticoagulants have emerged in recent years as attractive treatment options for acute pulmonary embolism with less major side effects and no need for INR monitoring. By considering options about usage of this new drug, clinical experiences may be improved about new oral anticoagulants in pulmonary embolism.
Acute exacerbations COPD often require hospital admission, if not treated adequately and promptly. Hospital-at-Home schemes can be an alternative to inpatient care for COPD exacerbations.

**Aim: of the study:**
Does a domiciliary COPD management programme reduce the need of inpatient care?

**Methodology:** 61 COPD patients admitted with a COPD exacerbation from November 2014 to April 2015 (Control Period) and had a FEV1 1.5 L were selected. Only 47 accepted to take part in our Domiciliary COPD Care Management Programme. They were assessed in our OP Clinic at the beginning of the programme, October 2015 and at the end April 2016 (Intervention Period) by a respiratory nurse, physiotherapist and an Internist. Their treatment was optimised and COPD education was given. They were followed-up weekly at home by our Hospital-at-Home team: General Practitioner and a District Nurse or earlier if there was an exacerbation. Inpatient resources use were measured in the control and intervention periods.

**Results:** 47 patients, mean age: 72 years, 89% men, mean FEV1: 0.78 and mean Pred. FEV1: 26%. There were 51 COPD exacerbations treated at home and 6 patients died. Hospital admission: 46 vs 22 (p 0.05); inpatient care days: 291 vs 148 (p 0.05) and Emergency Department visits: 85 vs 35 (p 0.05)

Total cost in the control period was 164081€ and 63287€ in the study period

**Summary:** A domiciliary COPD management programme in severe COPD patients reduces significantly the use of inpatient resources: emergency visits and hospital admissions and was cost effective.
Features of Patients Hospitalized with Exacerbation of COPD in the Pulmonology Department (Yaroslavl study, 2010-2017)

Shamil Palyutin

Clinical Pharmacology, Yaroslavl, Russia

Purpose: analysis population and epidemiological features of patients hospitalized in the pulmonology department with exacerbation of COPD.

Methods: cohort retrospective study; database of pulmonology department of city hospital for period from 2010 to 2017.

Results: on average for 2010-2017 about 220 people with COPD exacerbation were hospitalized annually in pulmonology department; an average 18.6% of the total number patients admitted to the department. In 2010 patients with exacerbation of COPD was 17.2% of all hospitalized annually in department, 2017 – 14.5%. Most were men – 84.1%; average age of patients was 64.7 years with increase over observation period. The average length hospitalization for exacerbation of COPD was 13.1 days with decrease. On admission to hospital FEV1 averaged 43.1%, while discharging from hospital – 49.2%. The combination of COPD and asthma an average – 7.2%. Cardiovascular pathology prevailed among concomitant diseases: arterial hypertension – 61.6%, ischemic heart disease – 25.3%. The respiratory function disorders was distributed as follows: stage 1 COPD – 5.4% of patients; stage 2 – 29.6%; stage 3 – 41.2%; stage 4 – 20.3%. Hospital mortality of patients with exacerbation of COPD in the period 2010-2017 increased from 0.8% to 2.6%.

Discussion: it is necessary to pay attention to features of majority patients with exacerbation of COPD - predominance men over 60 years old, suffering from serious cardiovascular diseases; the growth of risk factors for unfavorable outcomes. Epidemiological monitoring these patients can help unify approaches to managing patients and better understand characteristics of this group patients.
Oxygen Ozone Therapy in the Integrated Treatment of Chronic Obstructive Pulmonary Disease: a Pilot Study

Emma Borrelli

Medical Biotechnologies, Siena, Italy, Italy

Chronic Obstructive Pulmonary Disease (COPD) is a complex disease with a remarkable increase of production of Reactive Oxygen Species (ROS), proinflammatory cytokines and acute-phase proteins. Both inflammation and oxidative stress of the lungs extend to whole body and in many patients the disease is associated with extra-pulmonary manifestations like cardiovascular diseases, skeletal muscle dysfunction, osteoporosis and neurological degeneration. Bedside smoking cessation and standar therapy with bronchodilator/corticosteroid, it would be important to slow down the progression of the disease with an antinflammatory/antioxidant treatment. The ozone therapy has unique properties in reducing inflammation and upregulating the antioxidant system in the cells and consequently this treatment could be used as integrated approach of COPD therapy. To evaluate this hypothesis we enrolled 70 patients affected by COPD: 35 patients (control group) received a standard therapy (bronchodilators/corticosteroid), the other 35 patients underwent a cycle of ozonated autohaemotherapy in addiction to standard therapy. The patients treated with ozone therapy showed a significant improvement in the six minutes walking test and Saint George Questionnaire total score compared to control group, and the global quality of life appears improved after ozone therapy. These results suggest a possible use of the ozone therapy in the integrated treatment of Chronic Obstructive Pulmonary Disease and their efficacy deserve to be evaluate in a large trial.
Is the Red Blood Cell Distribution Width a Prognostic Factor in Patients with COPD

Mehmet Ufuk YILMAZ
Pulmonology, Izmir, Turkey

Background: Red blood cell distribution width (RDW) is a parameter that is defined as a new risk marker and is thought to indicate ineffective erythropoiesis due to chronic inflammation and neurohumoral activation. In this study, we aimed to investigate its effect on the exacerbation and prognosis of chronic obstructive pulmonary disease (COPD).

Materials and Methods: Patients with stable and acute exacerbation of COPD were included in this prospective study. The demographic characteristics of the patients were recorded. Patients who had cardiovascular disease, diabetes mellitus, hypertension, anemia, chronic liver disease and received blood transfusions within the last 2 weeks were excluded from the study.

Results: Of the 80 patients, 57 (71.3%) had stable and 23 (28.8%) had acute exacerbation of COPD. The mean age was 64 years. In patients with stable COPD, RDW levels at days 0 and 30 were 15% and 15%, respectively. In patients with acute exacerbation of COPD, RDW levels at days 0 and 30 were 15% and 15%, respectively. There was no statistically significant difference between the patients with stable and acute exacerbation of COPD in terms of RDW levels at days 0 and 30 (respectively, \( p=0.819 \) and \( p=0.647 \)).

Conclusion: We could not detect any association between RDW level and clinical conditions of COPD.
Usefulness of Gene Xpert MTB/RIF in the Diagnosis of Extra-Pulmonary Tuberculosis

Mohammad Hossain²
Respiratory Medicine, Dhaka, Bangladesh

Background and Aims: Diagnosis of extra-pulmonary tuberculosis is often delayed because of diverse clinical presentations and difficulties in the establishing microbiological diagnosis. This study aimed to evaluate usefulness of Gene Xpert MTB/RIF in the diagnosis of extra-pulmonary tuberculosis in Bangladeshi patients.

Methods: This cross-sectional study was done in BIRDEM General Hospital from 2013 to 2016 as a part of Bangladesh Diabetic Somiti (BADAS)-USAID-TB Care-II project. Representative samples from 590 clinically suspected extra-pulmonary tuberculosis cases were tested for Gene Xpert MTB/RIF along with conventional methods.

Results: Total patients were 590 [mean age 43.9 (range 1-95) years] with male predominance (326, 55.3%). Most (513, 86.9%) were diabetic and new (574, 97.3%) tuberculosis suspects; while 16 (2.7%) patients had past history of tuberculosis. Common samples were pleural fluid (125, 21.2%), urine (110, 18.6%), cerebrospinal fluid (CSF) (91, 15.4%), pus (82, 13.9%), tracheal aspirates (57, 9.7%), ascitic fluid (45, 7.6%), gastric lavage (31, 5.3%), broncho-alveolar lavage (BAL) (18, 3.1%), lymph node aspirates (11, 1.9%) and synovial fluid (8, 1.4%). Among 590 samples, 68 (11.5%) were positive for Mycobacterium tuberculosis. Diagnostic yield was common for lymph nodes (4/7, 57.1%), pus (25/82, 30.5%), BAL (4/18, 22.2%), tracheal aspirates (8/57, 14.0%), urine (7/110, 6.4%), CSF (6/91, 6.6%) and pleural fluid (7/125, 5.6%). Of the 68 Gene Xpert MTB/RIF positive samples, 52 (76.1%) were rifampicin sensitive, 16 (23.9%) showed intermediate sensitivity and none of the samples was resistant to rifampicin.

Conclusions: Gene Xpert MTB/RIF appeared as useful tool for diagnosing extra-pulmonary tuberculosis.
Thoracic Manifestations of Connective Tissue Diseases

Ruza Stevic

Pulmoradiology, Belgrade, Serbia

Background: The systemic autoimmune diseases can cause a variety of pulmonary and pleural abnormalities. The purpose of this paper is to review clinical and radiological characteristics of a series of patients (Pts) in whom connective tissue disease has been diagnosed.

Methodology: In this retrospective study, we reviewed the clinical, pathological and imaging findings in 60 patients diagnosed with connective tissue disease at the University Hospital for lung diseases.

Results: There were 49 women and 11 men, with a mean age of 42.95 years (range:19-83). Systemic Lupus Erythematosus (23 Pts), and Rheumatoid arthritis (19 Pts) were the most frequent, followed by systemic sclerosis(7pts), Sjogren syndrome(4pts), mixed connective tissue disease, ankylosing spondylitis and amyloidosis ,two each and one case with polymyositis. Dominant symptoms were fatigue and cough (80% and 65% respectively). Most common radiological manifestation was lung fibrosis (26 ), dominantly in systemic sclerosis, Sjogren syndrome and rheumatoid arthritis. Pleural effusion was diagnosed in 18 patients (11 with systemic lupus and 7 in rheumatoid arthritis). Consolidation were present in 11 patients(7 in SLE, 3 in RA and one in amyloidosis). Histological confirmation of connective tissue disease was obtained in 11(18.3%) patients, while in 47(78.3%) patients the diagnosis was based on positive serologic tests and clinico-radiological manifestations, and, in two cases, on clinical and radiological features alone.

Conclusion: Diagnosis of pleuropulmonary affection in connective tissue diseases, which show a variety of manifestations, requires pertinent analysis of serologic, clinical, imaging and/or histological findings.
Optimising Inpatient Resources: Role of a Domiciliary COPD Care Management Programme

CARLOS TRESCOLI

INTERNAL MEDICINE, ALZIRA, VALENCIA, Spain

Acute exacerbations COPD often require hospital admission, if not treated adequately and promptly. Hospital-at-Home schemes can be an alternative to inpatient care for COPD exacerbations.

Aim of the study: Does a domiciliary COPD management programme reduce the need of inpatient care?

Methodology: 61 COPD patients admitted with a COPD exacerbation from November 2014 to April 2015 (Control Period) and had a FEV1 1.5 L were selected. Only 47 accepted to take part in our Domiciliary COPD Care Management Programme. They were assessed in our OP Clinic at the beginning of the programme, October 2015 and at the end April 2016 (Intervention Period) by a respiratory nurse, physiotherapist and an Internist. Their treatment was optimised and COPD education was given. They were followed-up weekly at home by our Hospital-at-Home team: General Practitioner and a District Nurse or earlier if there was an exacerbation. Inpatient resources use were measured in the control and intervention periods.

Results:
47 patients, mean age: 72 years, 89% men, mean FEV1: 0.78 and mean Pred. FEV1: 26%. There were 51 COPD exacerbations treated at home and 6 patients died.
Hospital admission: 46 vs 22 (p 0.05); inpatient care days: 291 vs 148 (p 0.05) and Emergency Department visits: 85 vs 35 (p 0.05)
Total cost in the control period was 164081€ and 63287€ in the study period

Summary:
A domiciliary COPD management programme in severe COPD patients reduces significantly the use of inpatient resources: emergency visits and hospital admissions and was cost effective.
Zosteriform leishmaniasis: a Case Report.

Beatriz Coimbra
Medice, Brazil

Introduction
The cutaneous leishmaniasis (CL) is a common protozoal disease in Brazil that displays multiple clinical variants. So the purpose of this study was to report a rare zosteriform-like case in order to recommend that the CL be included as a differential diagnosis from others more common dermatologic diseases.

Case Report
A 64-y.o., male, white, fisherman, reports that 3 months ago appeared ulcerated lesions in thoracic region. Treatment for herpes zoster was ineffective. A skin biopsy showed granuloma and amastigote forms. The immunohistochemistry for research Leishmania antigens was positive and the Montenegro’s reaction was positive (7 mm). The patient received intramuscularly Glucantime 20mg/kg/day body weight daily for 20 days. The healing of the lesions occurred in three months.

Discussion
There are many different clinical presentations of CL. Usually the lesions are typical and present no diagnostic difficulties. However, there is a rare variant form linear or zosteriform presentation, with an unilateral dermatomal or zonal distribution, that do not cross the median line, that can be confused with herpes zoster, delaying the diagnosis.

Infection site on covered areas is associated with atypical clinical presentation due to anatomical and physiological variations.

Conclusions
It is necessary to include CL in the differential diagnosis of herpes zoster, especially in cases with a more prolonged evolution, in endemic areas. So the doctor must have the open mind because the atypical forms of CL can be confused with others more common dermatologic disease.
Evaluation of the Dual Energy Computed Tomography (DECT) Technique in Cases of Cranioencephalic Traumatisms

Rodrigo Gondim Miranda
Medicine, Teresina, Piauí, Brazil

**Introduction:** in cases of patients with traumatic brain injury, radiological images are of paramount importance in the detection of treatable lesions, especially before the occurrence of secondary neurological damage. Computed tomography (CT) allows precise detection of lesions that require immediate neurosurgical treatment.

**Objective:** the objective of this study was to qualitatively evaluate the images obtained by the Dual Energy Computed Tomography (DECT) technique in cases of cranioencephalic trauma.

**Methods:** The CT image is based on the attenuation of photons of an x-ray beam transmitted through the body, so the radiological image is associated to two main interactions: the photoelectric absorption and the compton scattering, that is, the image depends on the atomic number and electronic density. Conventional CT uses a single energy spectrum (ranging from 70 to 140 kVp with a 120 kVp standard), while DECT allows measurements using two different energy spectra (80 and 140 kVp), which is sufficient for the technique DECT can distinguish tissues with the same attenuation value, but with different chemical compositions.

**Results:** the results of the evaluation of the images obtained by DECT of primary lesions of cranioencephalic trauma were satisfactory, corroborating with the frequent use of such images in the analysis of the cranioencephalic trauma lesions.

**Conclusions:** Dual Energy Computed Tomography (DECT) imaging is a modality that effectively evaluates patients with head trauma. DECT is fast, less invasive (since the dose of ionizing radiation is smaller when compared to conventional tomography) and has few contraindications.
Purpose: This work consists in applying an image clustering technique that corresponds to the automatic classification method called fuzzy c-means in magnetic resonance imaging in the diagnosis of brain tumors. This type of segmentation is based on the region growth method that differs it from conventional classification methods by using the fuzzy set concept, which is appropriate to deal with inaccuracies and/or uncertainties in certain regions of a given image.

Objective: Application of the image clustering technique in magnetic resonance in the detection of brain tumors.

Methods: The fuzzy classification divides a set of data into a number of homogeneous clusters from an appropriate measure of similarity, to better analyze the properties of the image. The most used method of fuzzy clustering is the fuzzy c-means algorithm, proposed by Dunn and generalized by Bezdeq. This process consists of dividing the magnetic resonance images into classes, which make up groups in which each is separated by level of similarity.

Results: The fuzzy c-means technique was tested in magnetic resonance image and a greater efficiency was observed in the aid of the detection of brain tumors.
Conclusions: Through the fuzzy c-means segmentation method, which is based on the fuzzy number theory to extract the region of interest, satisfactory results are obtained in the diagnosis of brain tumors in relation to the results obtained with the Otsu method; this occurs due to the influence of fuzzy numbers, for which a pixel may belong to more than one region, but with different degrees of pertinence.
Application of Sparse Representation Algorithm in the Detection of Mammary Tumors in Magnetic Resonance Imaging

Rodrigo Gondim Miranda
Medicine, Teresina, Piauí, Brazil

Introduction: The present work consists in the segmentation of magnetic resonance imaging of the mammary tissue using the sparse representation method computational called k-means, with the objective of assisting in the detection of mammary tumors. This type of segmentation is based on the k-means classification method, so the idea of the algorithm is to provide a classification of information according to the image data itself, based on analyzes and comparisons between its numerical values. Thus, the algorithm will provide an automatic segmentation without the need for human supervision, ie without existing pre-classification.

Methods: The k-means algorithm is used to segment images, according to their attributes, into k classes (clusters). He assumes that the attributes of the points in the image form a vector space. The objective of the algorithm is to minimize the variance of the attributes of the points that are within a certain segment. Mathematically we can say that k-means minimizes the quadratic error function. The k-means algorithm was applied to the images with the objective of segmenting them, detecting the boundaries between structures of the brain of different characteristics.

Results: The k-means technique was tested on magnetic resonance imaging and a satisfactory efficacy was observed in the aid of the detection of mammary tumors.

Conclusion: The k-means segmentation method, which is based on the theory of automatic classification optimization to extract the region of interest, shows satisfactory results in the detection of breast tumors in relation to the results obtained with the Otsu method.
Anti-Synthetase Syndrome

Nerissa Naidoo
Department of Pulmonology, Inkosi Albert Luthuli Central Hospital, Durban, Kwa-Zulu Natal, South Africa

Introduction
Anti-Synthetase syndrome is a rare connective tissue disease. It is characterized by an inflammatory myositis, interstitial lung disease (ILD), arthritis and a positive aminoacyl t-Rna synthetase antibody.

Case Study
A 43 year old gentleman, retroviral disease negative presented with a 2 month history of progressively worsening dyspnoea, a non productive cough and polyarthralgia. On clinical examination he was ill looking with bilateral fissuring and hyperkeratosis of the fingers. He was hypoxic in room air with features of respiratory distress. Fine late inspiratory crepitations were heard bilaterally at the bases. His cardiovascular, abdominal, central nervous system and muscular skeletal examinations were all within normal limits. He had a leukocytosis and raised inflammatory markers. A chest radiograph showed bilateral lower zone reticular infiltrates and a high resolution computer tomography of his chest was suggestive of a Non specific interstitial pneumonia – organizing pneumonia picture. Pulmonary function was deferred as the patient was too ill to tolerate the procedure. A connective tissue screen was positive for Jo-1 antibodies. Based on his history of arthralgia, clinical findings of the “mechanics” hands, ILD and positive aminoacyl t-Rna synthetase antibody, he was diagnosed with Anti-synthetase syndrome. He was commenced on high dose steroids and azathioprine with good clinical improvement.

Conclusion
The true prevalence of Anti - synthetase syndrome is unknown because of its rarity. Anti-jo 1 is the most common aminoacyl t RNA synthetase identified and myositis and ILD is the most common clinical feature. Early identification and treatment is pivotal in reducing morbidity and mortality.
Depression and Disease Activity In Systemic Lupus Erythematosus

Hendra Gunawan

Internal Medicine Department, Surabaya, East Java, Indonesia

BACKGROUND: Neuropsychiatric lupus (NPSLE) is one of the common manifestations of systemic lupus erythematosus (SLE) and has wide range of clinical manifestations. Depression might be the initial symptoms of NPSLE as a result of inflammation but it may not be recognized in early phase.

AIM: To investigate the manifestations of depression in Indonesian SLE patients and its association with disease activity.

METHODS: A cross-sectional study was conducted involving SLE patients from December 2016 to February 2017 in Dr. Soetomo General Hospital. Disease activity was measured with Systemic Lupus Activity Measure (SLAM) score. Exclusion criteria were patients in flare episode, pregnancy, recent hospitalization, and the evidence of major NPSLE manifestations such as seizures, psychosis, cerebrovascular disease, and cognitive dysfunction. Depression was measured with Hamilton Depression Scale (HAMD).

RESULTS: There were 42 SLE patients consisted of 36 females and 6 males included with 20 patients with SLAM score 7 (group 1) and 22 patients with SLAM score ≥7 (group 2). Depression was observed in 10 (23.8%) patients with 2 patients in group 1 and 8 patients in group 2. The most prevalent symptoms related to depression were depressed mood, feelings of guilt, and decreased work and activities in 18 (42.9%) patients, 15 (35.6%), and 14 (33%) patients respectively. Depression was associated with disease activity (r=0.52, p=0.00).

CONCLUSION: Depression is common and its severity is associated with disease activity in SLE patients. Therefore, a routine screening of depression associated symptoms should be considered in routine follow up session for SLE patients.

3d Trabecular and Cortical Architecture of Living Vertebrae as Virtual Histology

Hisaya Tanioka

Radiology, Tokyo, Japan
**Purpose:** To provide a non-large-scaled device, but a small-sized device. Less-expensive and simple method that can be utilized for making 3D trabecular and cortical structure of living human vertebrae obtained from regular CT exams.

**Subjects and Methods:** This study involved 15 subjects. Scanning of the body was performed using collimation and pitch values of 1.00 mm and 1.00 respectively with bone algorithm. The field of view was 80mm using a 512 matrix. After transferring the image data to a CT work station, 3D visualization based on interactive direct volume rendering was made using the current distributed software. The defined threshold CT values of this image processing were following; maximum value is 450 HU and the minimum value is 80 HU.

**Results:** 3D virtual histological image of the vertebra was shown in the trabecular network and the cortex. Morphometric parameters as trabecular number (Tb.N.), trabecular separation (Tb.Sp.), and trabecular thickness (Tb.Th.) were frequently used and their measured values were as followed; TbN=1.00 ± 0.10, TbSp=0.57 ± 0.07 mm, and TbTh=0.45 ± 0.03 mm. These values showed significant correlations with the properties of the vertebral bone in the multiple previous studies.

**Conclusion:** This 3D virtual histological method is very simple. We can get topology and morphological parameters of living vertebrae under regular CT exams. Concerning the vertebral body strength, trabecular and cortical bone architecture play an important role. It is of great use in the diagnosis and treatment of
osteoporosis.
KEY WORDS: Trabecular bone; Cortical bone; Vertebra; CT; 3D
Background: Systemic sclerosis (SSc) is a connective tissue disease characterized by a microvessel dysfunction, the aberrant activation of the immune system, and the deposition of extracellular matrix in skin and viscera. It is a rare rheumatic disease and worldwide prevalence of SSc varies from 7/million to 489/million. In this study we investigate demographic and clinical properties of patients with systemic sclerosis.

Material and methods: A total of 43 patients with SSc were involved in this study. Age, gender, disease duration, type of disease, serological markers (ANA, anti Scl-70, anti centromere antibody), systolic and diastolic blood pressures, ejection fraction (%) and forced vital capacity of patients were recorded.

Results: The mean age was 51.8 ± 13.7. There were 41 (95.3%) females and 2 (4.7%) males. The mean duration of disease was 81.2 ± 90.1 (months). There were 7 (3%) limited disease while there were 40 (93%) diffuse cutaneous disease. According to the serological tests; ANA, anti scl-70 and anti centromere antibody positivity were in 34 (79.1%), 32 (74.4%) and 4 (9.3%), respectively. The mean systolic and diastolic blood pressures were 111.6±13.3 and 66.5±8.3, respectively. The mean ejection fraction was 56.1 ± 8.2. Forced vital capacity was calculated as 87.0 ± 22.1.

Conclusion: In this study we investigated the demographical and clinical properties of our systemic sclerosis patients. The majority of the patients were elder and female. Most of the patients were diffuse cutaneous sclerosis. The ratio of seropositivity was nearly 79% and ANA positivity was common. Finally, systemic sclerosis is an substantial healthcare problem and should be closely monitored.
Denosumab (60 mg sc q6months) prevents RANKL/RANK interaction and inhibits osteoclast formation, function and survival, thereby decreasing bone resorption and increasing bone mass and strength in both cortical and trabecular bone thus increasing BMD. Our clinical study is to explore the efficacy of this new therapy.

152 patients, all on fee for service, in a specialist clinic, were recruited into the study over a 3 years and 10 months period. 140 females, mean age 73.77 years (52-98) 12 males, mean 72.42 years (52-95) with definite osteoporosis or clinical osteoporosis (all were either menopausal or andropausal, (100%); DEXA T Score -2.5 (14, 9.21%); one or more fragility fractures (23, 15.13%); X-rays of Spine and hips: osteopenic or osteoporotic (32, 21.05%); loss of vertical height 1 1/2 inches, (94, 61.84%) were in the study group.

Some patients were on bisphophonates (22; 14.47%), on calcium + vitamin D (12; 7.98%), on calcitonin weekly injections (9, 5.92%), or treatment naive (109, 71.71%), before switching to our study. The total mean number of denosumab injections for the group were 3.48 (1-7) injections.

The side effects from sc injections were minimum and insignificant.

23 (15.13%) patients noticed improvement in their aches and pains in joints and back, morning stiffness, mobility after 6-8 weeks. 38 (25%) patients noticed definite improvement in their joint and back pains, morning stiffness and mobility after 3 months of injection. 60 (39.5%) patients noticed significant improvement on their second injection. 124 (81.6%) patients continued to have more than 5 injections.
IgG4-Related Aortitis – A Case Report

Monica Pon

Internal Medicine, Macau, Macau, Macau

Immunoglobulin G4-related disease (IgG4-RD) is a systemic immune-mediated fibroinflammatory condition, characterized by tumefied lesions that can affect multiple organs. Clinical manifestations depend on organ involvement and serum IgG4 levels can be elevated. Histopathology is gold standard which should be obtained whenever is possible. Glucocorticoids remains the first-line agent for remission induction in all patients with active, untreated IgG4-RD unless contraindications.

Among the involved organs, large vessel involvement can be easily overlooked and not be timely diagnosed, mainly due to its nonspecific presentations and difficulty to obtain a pathological specimen. Some of the reported cases may have already led to irreversible damage or significant complications. Herein we had a case of IgG4-RD involving the aortic arch, ascending aorta, thoracic descending aorta, left carotid artery and right subclavian/axillary artery. The 28-year-old male patient presented with recurrent nocturnal low grade fever for more than one year accompanied with chills, night sweating, ill-defined back pain and upper abdominal pain. We reached the diagnosis in four months after he first visited our department. The patient achieved overall clinical improvement within one month after prednisolone and mycophenolate mofetil was started. Follow up serum IgG-4 concentration was decreased and PET/CT scan also showed significant therapy response with complete resolution of the vascular lesions. Without delaying diagnosis and treatment, no major complications occurred.

In conclusion, IgG4-related aortitis can be one of the differential diagnoses in patients with fever of unknown origin, back pain and other unspecific symptoms. The goal is to make timely diagnosis and give appropriate treatment.
Microscopic Polyangiitis with Constitutional Symptoms: Case Report

Betul Erismis
Internal Medicine, Istanbul, Turkey

Introduction: Microscopic polyangiitis (MPA) is a systemic and nongranulomatous small vascular disease that often involves the lungs, kidneys, and skin. We aimed to present our case of MPA with kidney involvement with constitutional symptoms.

Case: A 66-year-old female patient was admitted to the hospital with complaints of fatigue and nausea. On examination, no pathology was detected except paleness in the conjunctiva. In the laboratory tests, urea was 150 mg/dL, creatinine was 6.12 mg/dL and C reactive protein was 6.25 mg/dL. Hemoglobin was 5.81 g/dL, white blood cell count was 9230/mm3 and platelet count was 257500/mm3. 21 erythrocytes and 13 leukocytes were observed in the urine test and 901 mg/day protein in the 24-hour urine test. Abdominal ultrasonography showed a left kidney size of 72x40 mm and a right kidney size of 79x45 mm. In clinical follow-up, renal biopsy was performed with the preliminary diagnosis of glomerulonephritis due to the absence of regression of urea and creatinine values and the richness of the urine sediment and was reported to be consistent with crescent necrotizing glomerulonephritis. Patients with MPOANCA value positive and PR3ANCA value negative were diagnosed with renal biopsy as microscopic polyangiitis. The patient was treated with pulse methylprednisolone for 3 days, followed by 1 mg/kg methylprednisolone and 500 mg cyclophosphamide intravenously. Plasmapheres was performed in the patient who did not fall below 4.5 mg/dL in creatinine level. After 10 cycles of plasmapheresis and 4 cycles of intravenous cyclophosphamide, the patient’s creatinine level was reduced to 2.4 mg/dL.

Discussion: Patients with MPA could present with countless different symptoms. The urgent initiation of treatment by bringing MPA into consideration in patients with clinically significant creatinine values is very important in terms of prevention and recovery of renal function.
Calcinosis of the Nasal in Dermatomyositis: A Case Report

Aysun ISKLAR²
Department of Internal Medicine, Istanbul, Istanbul, Turkey

INTRODUCTION Calcinosis cutis is characterized by the storage of insoluble calcium salts in the deep and subcutaneous tissue. The most common causes are trauma, degenerative diseases, connective tissue diseases and neoplasms. While dermatomyositis calcinosis is frequently reported from connective tissue diseases, it has never been identified on the nose. In this case, we planned to present a patient with calcinosis in the nasal cavity.

CASE PRESENTATION A 67-year-old female patient applied to Rheumatology polyclinic 8 years ago for all muscle weakness and skin rashes. Physical examination revealed gottron papules, periungal erythema, calcinosis. The patient, whose electromyography compatible with myositis but normal CK level, with amniotrophic dermatomyositis diagnosis was treated with methylprednisolone, azathioprine, hydroxychloroquine. Azathioprine was discontinued due to an increase in skin lesions and methotrexate was started. In the first month of methotrexate, MTX intolerance was developed in patient and increase in calcinosis was observed. Hence the treatment was continued only with hydroxychloroquine. At early stages, the patient was observed with calcinosis at knee, elbow and forearm extensor and then after five years lesions calcinosis in the nasal cavity was developed.(Figure-1) and skin lesions increased. The skin lesions of the patient was treated with IVIG. Despite decrease in skin lesions, calcinosis persists.

DISCUSSION Calcinosis is defined as calcium deposits in the deep, subcutaneous tissues, muscles and tendons. Calcinosis in DM can be localized in the knee, elbow, gluteal region. Deep calcium accumulation can lead to the development of cutaneous ulceration and sterile necrotic abscess. In the literature, calcinosis on the face is seen on mandible. Nasal calcinosis was not detected so far.
Rituximab in the Treatment of Refractory Rheumatoid Arthritis in a Tertiary Academic Hospital

**Tamsin Lovelock**

1. **Department of Internal Medicine, Johannesburg, Gauteng, South Africa**
2. **Department of Internal Medicine, Johannesburg, Gauteng, South Africa**

**Background**

Significant disability results from rheumatoid arthritis (RA) when treatment is delayed or inadequate. Rituximab is approved for use in RA in South Africa, but there is a paucity of data on its use in Sub-Saharan African populations.

**Objectives**

To determine the response to rituximab in refractory RA patients over a 6-month period. To describe predictors of response to rituximab, and to document short term adverse events.

**Methods**

A retrospective study of adults with RA receiving rituximab at Chris Hani Baragwanath Academic Hospital, between January 2012 and September 2016. Demographics, clinical and laboratory data were collected. The EULAR response criteria and minimal clinically important difference (MCID) in Health Assessment Questionnaire-Disability Index (HAQ-DI) were applied as outcomes. Baseline characteristics of responders were compared with non-responders.

**Results**

Of the 53 patients with RA refractory to 3 synthetic disease modifying anti-rheumatic drugs, 88.7% were African females. Mean age was 50.8 years, mean disease duration was 12.6 years. Over 90% of patients were antibody positive, 69.8% had high disease activity. The baseline mean HAQ-DI was 2.3. At 3 months, 81.1% achieved a EULAR response. Predictors of response included higher tender joint counts ($p=0.0473$) and higher disease activity scores ($p=0.0467$). The MCID in HAQ-DI was observed in 83% of patients. Improvements were not sustained at 6 months, although parameters were still better than at initiation. No adverse events were recorded.

**Conclusion**

Rituximab was safe and effective in controlling disease activity and improving functional disability in this cohort of predominantly African patients with severe, established RA.
Pauci-immune Vasculitis Occurring in A Patient with Gastric Adenocarcinoma

Aysun ISIKLAR*

Department of internal medicine, Istanbul, Istanbul, Turkey

We will present a case with perinuclear antineutrophil cytoplasmic antibody (pANCA)-associated vasculitis developing in a patient with gastric adenocarcinoma who achieved cure by surgery.

A 75-years old man presented to emergency department with shortness of breath over a week. The patient had history hypertension. In the history, it was found that the patient was diagnosed as gastric adenocarcinoma 2 months ago and that he underwent distal subtotal gastrectomy 2 week ago, resulting in cure. In physical examination, there were rhonchi at lungs. In laboratory evaluations, the creatinine and erythrocyte sedimentation rate (ESR) were 5.6 mg/dL and 98 mm/h, respectively. Renal sonography was compatible with acute kidney injury. Hemodialysis was initiated as the patient had oliguria. Since hemoptysis was developed during disease course, the patient underwent thoracic CT scan which revealed findings compatible to pulmonary hemorrhage. Given thoracic CT scan findings and positive p-ANCA, the patient underwent renal biopsy which was reported as crescentic, necrotizing glomerulonephritis without immunofluorescence staining. Methyl prednisolone (1 g/day over 3 days; iv) and cyclophosphamide (500 mg/month) were prescribed to the patient. The patient underwent plasmapheresis over 21 days. There was regression in pulmonary findings; however, there was no improvement in renal functions; thus, hemodialysis (3 days per week) was prescribed. The patient was discharged by scheduling oral steroid therapy and monthly cyclophosphamide therapy.

The cure in the malignancy doesn`t ensure recovery of glomerular pathology in cases with Pauci-immune crescentic glomerulonephritis associated to malignancy.
General Anxiety Disorder with Panic Attack in Systemic Sclerosis: a Case Report

RATIH ARIANITA AGUNG
Psychosomatic Division of Internal Medicine Department of Cipto Mangunkusumo Hospital, Jakarta, Indonesia

Background: Systemic sclerosis is a chronic multisystem autoimmune disease. Prevalance anxiety disorder in systemic sclerosis are estimated to 13%

Case presentation: We describe 52 years old woman with systemic sclerosis, came to Psychosomatic Clinic, Internal Medicine Department of Cipto Mangunkusumo Hospital, Jakarta, Indonesia, with chief complain breathlessness. She complained feeling of breathlessness, palpitate, choked, and soothe and improve 10-15 minutes. It attack 1-2 times a week. She also felt easy tired, devolve pain, difficult to sleep. She had methotrexate 7.5 mg per week, methylprednisolon 8 mg b.i.d. We evaluated with Hospital Anxiety and Depression Scale (HADS), and she got 8 point for anxiety, and 5 for depression. Heart rate variability showed Autonomic Nervous System (ANS) balanced but the activity was poor. She diagnosed Axis I: general anxiety disorder with panic attack; Axis II: not found personality disorder; Axis III: systemic sclerosis; Axis IV: apprehensive about her disease; Axis IV: good adaptation. She improved with alprazolam 0.5 mg, sertralin 50 mg dan supportive psychotherapy.

Discussion: Anxiety are highly prevalent in patient with chronic disease, but remain undertreated. Patient described concern about the prognosis of their chronic disease and uncertainty about their future. The overlapping physical symptoms of the disease and anxiety also make diagnose difficult. In this case, the patient improved after had treatment for her anxiety.

Conclusion: We suggest screening for anxiety practices in the systemic sclerosis population.

Keywords: anxiety, general anxiety disorders, panic attack, systemic sclerosis.
High dose dexamethasone-cyclophosphamide pulse therapy in systemic sclerosis: experience from tertiary care centre in north India

Gurvinder Pal Thami
Department of Dermatology, venereology and Leprosy, Chandigarh, India

Systemic sclerosis (SS) is an autoimmune multisystem collagen vascular disorder characterized by fibrosis of skin and internal organs with vascular abnormalities. Disease modifying treatments are scarce in SS. Dexamethasone-cyclophosphamide pulse (DCP) therapy and dexamethasone pulse (DP) therapy has been tried in many immune-mediated disorders.

A retrospective review of records of forty eight patients diagnosed to have systemic sclerosis on DCP and DP therapy during 2010-2017 was carried out to assess the efficacy and safety of DCP and DP therapy in SS patients who presented at Department of Dermatology, Government Medical College and Hospital, Chandigarh, India. Patients with interstitial lung disease have received DCP therapy (23), while others have received DP therapy (25). Along with pulse therapy, patients also received calcium channel blocker, proton pump inhibitor, antimotility durgs as per symptoms. Clinical, laboratory, treatment and outcome details were recorded. Twenty three patients received DCP therapy and 17 out of these 23, have completed monthly DCP for 12 months. Of the study subjects, 12 had diffuse systemic sclerosis and 5 had limited systemic sclerosis. Significant improvement was observed in 14 (82.3%) patients in skin tightening, decrease in severity and incidence of Raynaud’s phenomenon, improvement in pulmonary function with no recurrence on follow up. There was no mortality during the study period. Remaining 25 patients received dexamethasone pulse DP and showed similar improvement.

DCP and DP therapy appears to have a potential role in treatment of systemic sclerosis.
Libman-Sacks endocarditis in a Bangladeshi patient suffering from rhupus

Muhammad Rahim²
Nephrology, Dhaka, Bangladesh

Introduction
Libman-Sacks endocarditis is one of the most common cardiac manifestations of systemic lupus erythematosus (SLE). Most patients remain asymptomatic; when symptomatic, they usually present with embolism. Patients generally test positive for anti-phospholipid antibody (aPA).

Case Report
A 34-year-old Bangladeshi lady, diagnosed with rheumatoid arthritis (RA) and ischaemic stroke, was referred for echocardiography. She was anaemic and there was evidence of left hemi-paresis. She had tenderness in hand joints. Auscultation of precordium was essentially normal.

Trans-thoracic echocardiogram revealed an oscillating mass in the right ventricle arising from inter-ventricular septum. Trans-oesophageal echocardiogram confirmed the above finding and excluded any shunt.

The patient had positive rheumatoid factor (RF), anti-cyclic citrullinated peptide (anti-CCP), anti-nuclear antibody (ANA) and anti-double-stranded DNA antibody (anti-dsDNA). aPA (IgM and IgG) was negative. Blood cultures did not reveal any growth. So, she was diagnosed as a case of RA and SLE overlap (rhupus) along with Libman-Sacks endocarditis.

Discussion and conclusion
Overlap of RA and SLE is uncommon. Up to 20% RA patients may have positive ANA and 30% of SLE patients may have positive RF. Up to 2% of RA patients may fulfill criteria for rhupus. Central nervous system (CNS) involvement in rhupus varies from cerebritis, venous sinus thrombosis, CNS vasculitis, thrombo-embolic stroke etc. Embolic events may arise from Libman-Sacks vegetations.

Rheumatological diseases evolve over years. Every new symptom should be taken into account during evaluation and follow-up, as management and prognosis varies with each different diagnosis. Every patient with connective tissue disease should undergo cardiac evaluation.
Frequently associated with patients with different stages of immunosuppression or immunodeficiency, Listeria meningitis has few reports about its presentation in young adults with no immune system impairment. In this report, we present a severe case of Listeria meningitis with rapid evolution and unfavorable outcome in an adult with Juvenile Chronic Arthritis, without current immunosuppression therapy. This article presents a few topics to be discussed about the empirical therapeutic choice to be considered on patients with similar diseases, even without immunosuppression therapy. It was based on literature review, searching for a correlation between autoimmune diseases and cases of Listeria meningitis.
Association of Cardiometabolic Risk Factors and Reduced Renal Function in a Population of 25-45 Years

Mikhail Voevoda
Research Institute of Internal and Preventive medicine Branch of the Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Sciences (IIPM Branch of IC&G SB RAS), Novosibirsk, Russia

Purpose: to study the associations between reduced renal function with cardiometabolic risk factors in persons aged 25-45 years.

Materials and methods: A cross-sectional population study of one the typical areas of Novosibirsk (Russia) was performed during 2013-2016. The study included 468 men and 606 women aged 25-45 years. Respondents were measured blood pressure (BP), waist circumference (WC), blood levels of lipids, plasma glucose, creatinine. Calculation of the glomerular filtration rate (GFR) was carried out according to the formula CKD-EPI. Reduced by kidney function at GFR

Results: The proportion of people with GFR90ml/min/1.73 cm2 among men was 9.8%, among women - 34%. Based on the results of multivariate linear regression analysis, a significant negative association of GFR with age was determined, there was no association of GFR with systolic BP (SBP) in either men or women. In men, inverse association of GFR with low-density lipoprotein cholesterol (LDL-C), triglycerides (TG), direct association of GFR with WC was determined. A significant inverse association of GFR with diastolic BP (DBP) was achieved only with the exception of the regression model of TG. In women, inverse association of GFR with LDL-C, DBP, the direct association of GFR with WC was determined. In a stepwise analysis, the validity of all associations achieved was confirmed, with the exception of the association of GFR with WC in men.

Conclusions. Reduced GFR is associated with an increase in DBP; levels of LDL-C, TG are inversely associated with the level of GFR; in men increasing TG levels is more important in reducing GFR than increasing DBP.