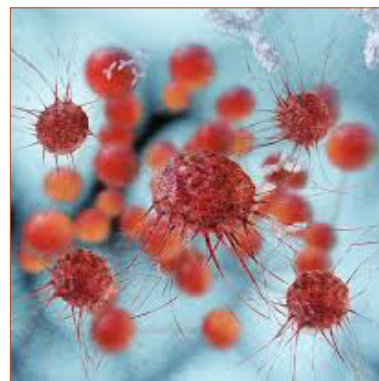
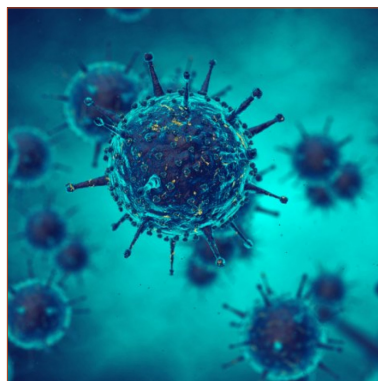
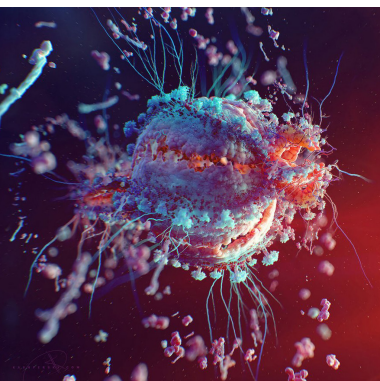

Poster Presentations/Abstracts

Internal Medicine and Breast Pathology 2018



International Conference on

Internal Medicine & Practice and Primary Care

&

International Meeting on

Breast Pathology & Cancer Diagnosis

April 04-05, 2018 | Miami, USA

Improving medication reconciliation in Robert Packer Hospital: A quality improvement project

Asish Regmi

Guthrie Robert Packer Hospital, USA

Introduction: Medication reconciliation is the process of creating the most accurate list possible of all medications a patient is taking—including drug name, dosage, frequency, and route—and comparing that list against the physician’s admission, transfer, and/or discharge orders, with the goal of providing correct medications to the patient at all transition. The average hospitalized patient is subject to at least one medication error per day. More than 40 percent of medication errors are believed to result from inadequate reconciliation in handoffs during admission, transfer, and discharge of patients. Of these errors, about 20 percent are believed to result in harm. Many of these errors would be averted if medication reconciliation processes were in place.

Methods: During the project period which extended from September to October 2017, 106 patient charts were reviewed. Fifty patient charts were reviewed during pre-intervention period and 56 patient charts were reviewed during intervention period. Preintervention period was until September 18 and intervention period started after that. Only the patient admitted to two floors 6NW and 7M with eight or more medication were included. Medication reconciliation done during the admission and discharge were reviewed. Then intervention was done by educating residents and nurses about the project and differed ways available for doing the medication reconciliation. The charts of the patient admitted after my interventions were also reviewed for medication reconciliation error.

Results: Of the 50-patients enrolled in pre-intervention period 35 patient had incomplete medication reconciliation. Discrepancies were present on 30 patient’s medication reconciliations. Most of the discrepancies were for dosing. Other discrepancies included duplicate medication, old medication not removed and important medication not resumed during admission. During post intervention of 56 patients, 18 patient’s chart had incomplete medication reconciliation and discrepancies were present on 8 patient’s charts.

Conclusion: Error and discrepancy do occur during medication reconciliation. Mostly occurs during transfer to floor from ICU or ER and on those patients who has multiple medications. Other discrepancies occur during admission from nursing home or discharge to the nursing home. It is impossible to eliminate medication reconciliation error, but some steps can be taken to reduce it. Change in EMR to be more user friendly, educating staff, patient and relatives and an appointment of medication historian whose job will be medication reconciliation of the patient who comes to the hospital.

Speaker Biography

Asish Regmi completed his medical school from Kathmandu medical college in the year 2017. After that he started working as medical officer in Kathmandu region for almost 4 years. Then he came to USA for his residency in the 2016 and is now 2nd year medical resident in Guthrie/ Robert Packer hospital.

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 Notes:

Headache and Cerebral venous thrombosis

Parisa Mehran

Jersey City Medical Center, USA

Introduction: Cerebral venous thrombosis is a rare condition that is potentially life-threatening that can be easily overlooked in the setting of vague symptoms in a young patient without known risk factors. Patients often present with vague headache, AMS, focal motor deficits, visual symptoms and/or dysarthria and most frequent presentations are isolated headache. The confirmation of CVT relies on the findings of thrombi in the cerebral veins and sinuses by MR venography or veno CT. Pro-thrombotic conditions such as infections, trauma, malignancy, lupus, anti-phospholipid syndrome, or usage of OCP are associated with the condition. Standard care involves immediate anticoagulation often yielding good functional outcomes.

Case Discussion/Results: 35-year-old Dominican female with a PMH of sinusitis and HTN who presented with a left sided headache for the past seven days without focal neurologic deficit. The patient denied photophobia, phonophobia, vertigo, eye pain, seizures, weakness, numbness/tingling or visual changes, aura and was found to only have nystagmus

on admission. Cranial nerves were grossly intact and vitals hemodynamically stable. MRI venography of the brain revealed a left transverse sinus thrombosis and a sigmoid sinus thrombosis and patient was placed on therapeutic lovenox. Clinically patient improved within three days of lovenox without focal neurologic deficit.

Conclusion: A high level of suspicion for a rare disorder like CVT should be considered as part of the differential diagnosis of a headache especially with known risk factors and immediate anti-coagulation treatment can prevent fatal complications. The infrequency with which it is diagnosed/occurs makes CVT a diagnostic challenge and important in hospital medicine.

Speaker Biography

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 Notes:

Suspected *Mycobacterium abscesses* infection post cosmetic surgery in the Dominican Republic

Marissa Sansone

Jersey City Medical Center, USA

There have been reports associated with an increased number of *Mycobacterium* species and nontuberculous species isolated from those who received plastic surgery procedures in the Dominican Republic. *Mycobacterium abscesses* is associated with nosocomial transmissions and is responsible for multiple soft tissue diseases, bacteremia and is known to be quite multi-drug resistant. We have a case of suspected *Mycobacterium abscesses* in a patient who had liposuction and an abdominoplasty in the Dominican Republic and later on developed multiple abscesses at the liposuction injection sites.

Case Presentation: Our patient is a 53 year-old Trinidadian female without significant PMHx who completed liposuction along with abdominoplasty involving a redistribution of the fat into the buttocks in the Dominican Republic. Patient reports that one month after the procedure, she started to experience pain in her buttocks associated with fevers and chills. She had an incision and drainage at a major NYC hospital and cultures were taken at that time. Patient remained in the hospital for IV Imipenem/Cilastatin and Cefoxitin. AFB stain from the first I+D was positive for *Mycobacterium sp.* She continued to have persistent pain even while on her antibiotic regimen at home, therefore, she presented to our hospital a few weeks after her previous discharge. On physical exam, there were multiple abscess formations of varying sizes (1cm to 8cm) at the liposuction sites that were variably fluctuant in nature. *Mycobacterium abscesses* was

not isolated in our hospital, but clinical suspicion was very high due to travel history and positive AFB from prior wound culture; hence, the patient was discharged on Ciprofloxacin, Clarithromycin and Linezolid for 4 months with a follow up at our Infectious Disease office.

Discussion: *Mycobacterium abscesses* is comprised of a group of multi drug resistant subclasses of nontuberculous mycobacteria that are responsible for pulmonary, CNS, ocular, skin and deep tissue manifestations in addition to bacteremia. It was known to be a water contaminant but over the years it has been known to contaminate medical devices. AFB stain for *Mycobacterium sp* has a specificity of 97.5%. However, in our patient, wound cultures did not show any microbial growth which is most likely due to the patient being on multiple antibiotic treatments. Typical treatment is a combination antimicrobial therapy of a macrolide usually Clarithromycin in addition to Amikacin and Cefoxitin or Amikacin and Imipenem for several months. Source of infection could be contaminated tap water used to clean the cannulae during liposuction or contamination of the ammonium solution used to disinfect the instruments.

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Notes:

Steroids and dose interruption in Dasatinib associated Pleural effusions

Parisa Mehran MD

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Introduction: Dasatinib is an orally available chemotherapeutic tyrosine Kinase inhibitor approved for CML found to be recognized for rare occurrence of a drug induced immune reaction causing pleural effusions. Early identification and treatment is important and different management techniques such as dose interruption, complete discontinuation and short term steroid managements have been used although need to be more thoroughly studied.

Methods: 74 year old male with PMH CML on dasatinib admitted for 5 month history grade 3 pleural effusions and worsening dyspnea. His treatment of CML with Dasatinib was changed approximately 10 months prior admission from imatinib to dasatinib and over the preceding 5 months has developed new symptomatic recurrent pleural effusions. The PE was consistent with crackles bibasilar lower lobes consistent with pleural effusions without JVD or edema. CXR revealed Bilateral pleural effusion Right > Left requiring his third thoracentesis inpatient within 3 months.

Results: Pleural Fluid analysis revealed exudative lymphocyte predominant 70 monocyte 30, ADA 7.5. Hospital course

without overt signs of infection afebrile, absent WBC. CXR revealed Bilateral Pleural effusions Right> Left . Quantiferon negative. Echo preserved EF. Therefore, obvious causes of pleural effusion ruled out. Suspicion for drug induced immune reaction was considered given the relationship with recently initiating dasatinib. Management entailed dose interruption and a short 1 week of course of low dose steroids on discharge. Repeat CXR 2 weeks later revealed improved bilateral pleural effusions with 85 % clinical improvement reported by the patient.

Conclusion: Dasatinib associated pleural effusions treated with short term steroids and dose interruption provides alleviation of clinical symptoms and improvement in radiologic findings in short term management.

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Notes:

Drug-induced long QT associated cardiac arrhythmias among adult patients in a community hospital

Ahmed Elshazly

Atlantic Care Regional Hospital, USA

Introduction: Cardiac arrhythmias among hospitalized patients are a common problem in the hospitals. Big part is associated with drug-inducing long QT (DILQT). DILQT are widely used in inpatient and outpatient settings. Our research project aimed to assess the monitoring of QTc-interval as a primary preventive mechanism for DILQT-associated cardiac arrhythmias among hospitalized patients in a community hospital.

Methods: This retrospective study included data obtained from patients who had a diagnosis of cardiac arrest, ventricular tachycardia, and/or syncope while hospitalized between January 1, 2013 and December 31, 2016. Descriptive analysis was performed to assess the proportions of patients who were on two or more of QT interval prolonging medications and had the aforementioned outcomes.

Results: The numbers of patients who had a diagnosis of cardiac arrest, ventricular tachycardia, and/or syncope were 3,583 in 2013, 3,828 in 2014, 4,105 in 2015, and 4,376 in 2016. Of those, approximately 256 (7.1%) in 2013, 241 (6.3%) in 2014, 268 (6.5%) in 2015, and 263 (6.0%) in 2016 were on two or more of QT interval prolonging medications.

It was noted that patients on two or more DILQT had higher proportions of ventricular tachycardia compared cardiac arrest or syncope in all the years. Less than 10% of the patients on two or more QT prolonging medications received an EKG on admission or anytime during their admission in all the years.

Conclusion: This study, which provides the preliminary data for a quality improvement study, shows that there are missed opportunities to prevent DILQT-associated cardiac arrhythmias among hospitalized patients on two or more QT interval prolonging medications. Power chart pop-up message will fire when prescriber will order DILQT while the patient is on one or more of DILQT advising the prescriber to check QTc of the patient. Another study to compare the arrhythmia incidence after the intervention application.

Speaker Biography

Ahmed Elshazly MD has graduated from medical school during 2012. He then was a research fellow for 2 years at Albert Einstein College of Medicine, Mayo Clinic and West Virginia University. He is currently pursuing Internal Medicine residency at Atlantic Care Regional Hospital, Atlantic City, NJ.

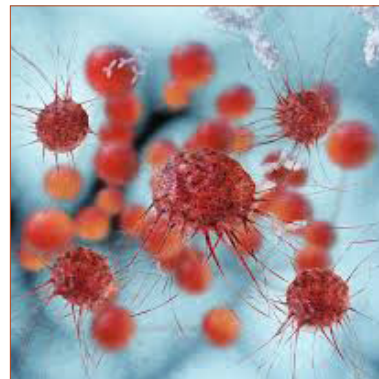
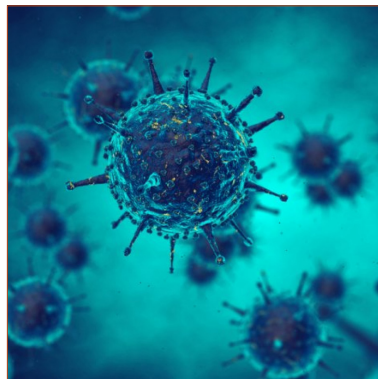
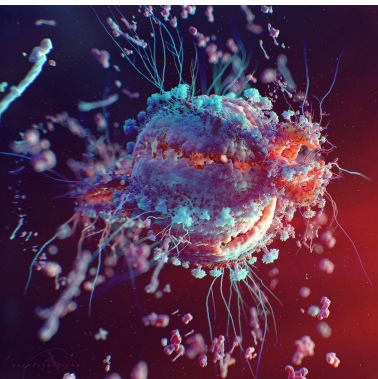
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Notes:

e-Posters

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Breast cancer cryoablation - offering patients a choice

Robert C Ward, Ana P Lourenco and Martha B Mainiero

Rhode Island Hospital, USA

Percutaneous ultrasound (US)-guided cryoablation is a minimally-invasive technique that kills targeted tissue with extreme cold. We are enrolling patients in the FROST clinical trial aimed at determining the rate of successful tumor cryoablation instead of surgical resection in univocal IDC, less than 1.5 cm in size, at least 0.5 cm from skin, ER/PR+ HER2-, and clinically node negative. We are also offering cryoablation as an alternative to surgical resection in selected patients excluded from the trial. The procedure is performed in the breast imaging center using local anaesthesia. Ultrasound is used for needle placement and intraprocedural monitoring. The Sanarus Visica 2 Treatment system 10-gauge needle is placed through the center of the tumor. The device uses closed loop circulation of liquid nitrogen creating an ice ball. The freeze-thaw-freeze treatment cycle is 6-10-6 minutes for tumors less than 1 cm and 8-10-8 minutes for tumors up to 2 cm. Intraprocedural saline hydro dissection protects the skin. Periodic lifting up of the ablation probe protects the chest wall with the patient supine. Four patients have been treated off-trial at our facility between July and November 2017, age 71-88. These invasive tumors

were of any histology, up to 1.8 cm in size, and at least 0.2 cm from skin. All tumors were encompassed by a greater than 1 cm margin of ice on all visible sides, ensuring the tumor was encompassed by the -30 degree C lethal isotherm. All patients tolerated the procedure well with local anaesthesia. There have been no complications. Patients have been able to leave the facility within 20 minutes of procedure completion, and resume all normal activities within 24 hours. US-guided cryoablation of breast cancer is a well-tolerated, minimally-invasive treatment modality for selected patients. Long term follow up is needed to demonstrate efficacy.

Speaker Biography

Robert C Ward received his MD from the George Washington University in Washington, DC, in 2010. He then completed an internship in Internal Medicine, residency in Diagnostic Radiology, and fellowship in Women's Imaging through the Alpert Medical School of Brown University affiliated hospitals, including Rhode Island Hospital and Women and Infants Hospital. He specializes in breast imaging and intervention, including ultrasound-guided breast cryoablation. His research interests also include the immune response to cryoablation.

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Notes:

Non-specific interstitial pneumonitis cellular subtype: A challenging diagnosis

William Grist and Yasmine Elamir
RWJ Barnabas Health, USA

Our patient was a 52-year-old female who was admitted for shortness of breath and productive cough with white sputum. The patient reported that her symptoms began gradually five months ago and had progressively worsened. The patient associated symptoms with a five-pound weight loss. She denied fever, chills, hemoptysis, and chest pain. She was seen by her primary care physician one week prior to admission and was placed on Doxycycline for presumed community acquired pneumonia, as well as a trial of steroids, which slightly improved her symptoms. Patient was advised to come to the emergency department when symptoms persisted. Patient denied smoking, drinking, environmental, or hazardous exposures. Patient denied having any pets. Patient worked as a secretary. The patient was originally from Arkansas and admitted to taking a trip there four weeks prior to admission, but reported her symptoms started prior to this. She had moved to Illinois twenty years ago. On physical exam, patient was tachypnea and had difficulty finishing sentences. Her breath sounds were decreased in the lung bases with mild bibasilar crackles. Labs were unrevealing. Chest X-ray revealed basilar opacities with associated volume loss. CT showed bilateral areas of airspace opacity with air bronchograms suspicious for pneumonia with lymphadenopathy. The patient underwent an echocardiogram that showed no signs of heart failure. Patient was initially treated with a course Ceftriaxone and Azithromycin

with no improvement. The patient was then treated with Levaquin without improvement of symptoms. A bronchoscopy with bronchial washing and brushing was performed which revealed reactive bronchial cells on cytology with no evidence of malignancy. Cardiac thoracic surgery was consulted. The patient underwent video assisted lung biopsy and lymph node biopsy. Lung biopsy revealed interstitial fibrosis, intra-alveolar macrophages, type II pneumocyte hyperplasia, and chronic inflammation with lymphoid aggregates, diagnosed as non-specific interstitial pneumonitis cellular subtype. This case demonstrates firstly that idiopathic interstitial pneumonias (IIP) should be considered in patients with diffuse lung disease and unresolving pneumonia. Secondly, although some classic cases of interstitial pneumonia can be diagnosed with high resolution CT, some cases still require thoracic lung biopsy for definitive diagnosis and classification to aid treatment and prognosis. Non-specific interstitial pneumonitis (NSIP) is rare compared to the other six causes of IIP. NSIP is further divided into two groups based on pathology; a cellular type and a fibrotic type. The former is rarer and has a better prognosis. The difference in prognosis validates having a subdivision in NSIP, especially in our patient. Thirdly diseases like collagen vascular disease and pneumoconiosis can cause similar findings and should be ruled out before reaching a final diagnosis.

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Notes:


Ulcerative colitis leading to repeated portal vein thrombosis despite anticoagulation

Yasmine Elamir and William Grist
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Patient is a 33-year-old Puerto Rican female with past medical history significant for pulmonary embolism, portal vein thrombosis on Coumadin, untreated ulcerative colitis, peptic ulcer disease, who presented with one episode of syncope and dark red stools with duration of one day. On review of systems, the patient also complained of nausea, dizziness, and non-radiating “squeezing” upper abdominal pain. Patient had fatigue and when she arose from bed the day of admission, she found herself lying on the floor with residual pain on the back of her head and left side of her body. Patient was unsure how she fell or how long she lost consciousness. Patient had one prior episode of severe bleeding in the past four-five years ago after banding procedure. Patient denies pain or straining with bowel movements, NSAID use, fevers, chills, weight loss, and pruritus, use of supplements or herbal remedies, recent travel, sick contacts, history of right upper quadrant abdominal pain, emesis or rashes. Vitals on admission were pulse 89, respiratory rate 20, and blood pressure: 109/59, PO₂ 99%. Physical exam was notable for minor orthostatic hypotension and a soft non-distended abdomen with mild tenderness to deep palpation in the epigastric area with no rigidity, guarding, or masses. Patient was admitted to the ICU when systolic blood pressure dropped to the 70’s with tachycardia in the 100-110s. Hemoglobin was found to be 5.3, prothrombin of 25.5, international normalized ratio of 2.39, and partial thromboplastin time of 26.4. Patient was then given three liters normal saline and six units total of packed red blood cells with improvement of symptoms. Patient was started on Protonix drip. Endoscopy

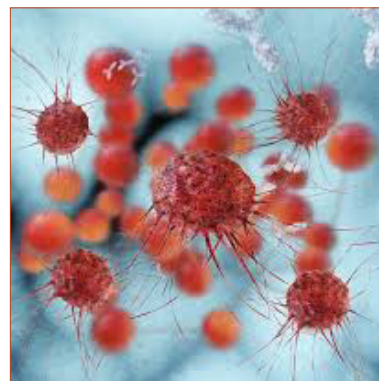
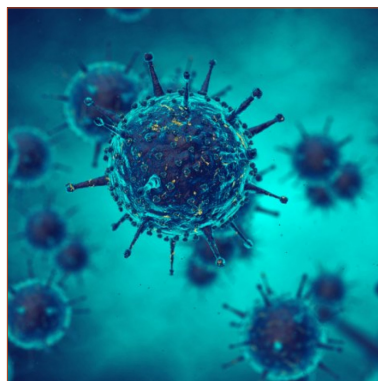
was performed which showed grade II esophageal varices, gastritis and gastric erosion with no active bleeding. Patient was then started on an octreotide drip. Patient’s ulcerative colitis was diagnosed twelve years ago, but patient admits to non-compliance after many attempted trials of therapy without alleviation of symptoms. Patient continued to have persistent symptoms including intermittent diarrhea, cramping abdominal pain. Patient also had a negative coagulopathic work up including Factor V Leiden deficiency, prothrombin gene mutation, and Protein C and S deficiency. Last colonoscopy was in August 2016, which showed diffuse inflammation and polyps. Cirrhosis workup was obtained to search for cause of increased portal venous pressure and therefore varices. Magnetic resonance imaging of the abdomen findings unexpectedly revealed thrombosis of the portal vein with cavernous transformation. Patient was then restarted on Coumadin which had been stopped due to bleeding and was patient was bridged with heparin until patient achieved therapeutic internationalized ratio levels. After discussing at length with patient’s hematologist and gastroenterologist the conclusion was reached that her suspected hypercoagulability was due to uncontrolled ulcerative colitis. This case illustrates the importance of always considering portal vein thrombosis as part of initial differential in someone with even minimal abdominal pain who is hypercoagulable. Most notably it helps signify the importance of treating uncontrolled inflammatory bowel disease as it can cause hypercoagulability.

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 Notes:

Accepted Abstracts

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Low back pain, expert approach

Ayman Mufti

Rheumatologist, USA

Low back pain is one of the most common medical problems presenting to clinicians. Most Americans have experienced low back pain at one time in their life. Direct health cost of LBP and indirect cost due to reduced productivity are very high. Low back pain is frequently classified and treated on the basis of symptom duration and potential cause. Most episodes of back pain are related to mechanical regional abnormalities, majority are self-limited. Excessive and unnecessary diagnostic tests in this group are not warranted. The therapy chosen for this common problem should relieve symptoms with toxicities limited to a minimum, while natural healing occurs. However, up to 10% of cases can be due to serious non-mechanical/medical causes which frequently missed. Because of high prevalence of LBP, this small percentage will result in significant number of cases. Missing or delaying the correct diagnosis can have

dire consequences. Spondyloarthropathy is an important medical cause of back pain, it usually affects young male during productive years. Studies showed an average of 8 years delay in diagnosis. The presence of very effective treatment in recent years makes it of prime importance to make this diagnosis on time and prevent long suffering and financial loss. The physician's role is to make the correct diagnosis without delay, to keep the diagnostic cost down, and to provide safe and effective treatment without causing any financial, physical or psychological harm which might result from delayed or incorrect diagnosis. In this lecture the physician will learn how to navigate the signs and symptoms of LBP to identify the non-mechanical/medical causes accurately and to implement an appropriate treatment plan ASAP.

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Direct evidence of viral infection and mitochondrial alterations in the brain of fetuses at high risk for schizophrenia

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Introduction: There is increasing evidences that favor the prenatal beginning of schizophrenia. These evidences point toward intra-uterine environmental factors that act specifically during the second pregnancy trimester producing a direct damage of the brain of the fetus. The current available technology doesn't allow observing what is happening at cellular level since the human brain is not exposed to a direct analysis in that stage of the life in subjects at high risk of developing schizophrenia.

Methods: In 1977, we began a direct electron microscopic research of the brain of fetuses at high risk from schizophrenic mothers in order to finding differences at cellular level in relation to controls.

Results: In these studies, we have observed within the nuclei of neurons the presence of complete and incomplete viral

particles that reacted in positive form with antibodies to herpes simplex hominis type I [HSV1] virus, and mitochondria alterations.

Conclusion: The importance of these findings can have practical applications in the prevention of the illness keeping in mind its direct relation to the aetiology and physiopathology of schizophrenia. A study of amniotic fluid cells in women at risk of having a schizophrenic offspring is considered. Of being observed the same alterations that those observed previously in the cells of the brain of the studied fetuses, it would intend to these women in risk of having a schizophrenia descendant, previous information of the results, the voluntary medical interruption of the pregnancy or an early anti HSV1 viral treatment as preventive measure of the later development of the illness.

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Increasing antimicrobial resistance: Clinical and other outcomes in community infections

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Antimicrobial resistance (AMR) is one of the greatest clinical challenges in modern medicine. It has been predicted that by 2050 mortality due to AMR will exceed 10 million with excess costs of \$100 trillion (O'Neil report 2016). The majority of infections are treated empirically in the community setting. In the US, the most frequent of bacterial infections are skin and respiratory and urinary tract infections. The most common bacterial causes of these infections are *Staphylococcus aureus* (methicillin susceptible and methicillin resistant) and Gram-negative species, *Streptococcus pneumoniae* and *Escherichia coli* respectively. Each of the species has significant resistance challenges often leading to adverse outcomes, both clinical and economic. Current empiric antibiotics are frequently

inadequate to cover the predominant pathogens or have a challenging adverse event profile. Empiric therapy for skin infections should encompass MRSA (40-50% of staph isolates) and in certain patients Gram negative pathogens (which occur in almost 40% of infections), macrolide resistant pneumococcus (40%) and trimethoprim/sulphamethoxazole (>30%) and fluoroquinolone *Escherichia coli* (10-15%) in urinary tract infections. Failure of initial empiric therapy is assessed by one of four outcomes, a need for extra initial antibiotics, a second course of different class, need to visit the urgent care clinic or the emergency department (with or without admission). In addition to clinical failure these outcomes have a clear economic impact.

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The 2001-2016 World Health Organization vs. European clinical, molecular and pathological and the 2008-2018 clinical, laboratories, molecular and pathological (CLMP): Euro-Asian classification of *JAK2*, *CALR* and *MPL* mutated myeloproliferative neoplasms

Jan Jacques Michiels

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The 2008 World Health Organization (WHO) criteria do not define the prodromal and advanced or masked stages of the myeloproliferative neoplasms (MPN) essential thrombocythemia (ET) and polycythemia vera (PV). Bone marrow biopsy (BMB) has a near to 100% sensitivity and specificity to distinguish thrombocythemia in BCR/ABL positive CML and ET, and the myelodysplastic syndromes in RARS-T and 5q-minus syndrome from thrombocythemia in myeloproliferative disorders (MPD). Bone marrow pathology combined with *JAK2*, *MPL* and *JAK2* exon 12 mutation detection is a pathognomonic clue to each of the MPNs. Each of the *JAK2* trilinear MPN markers including spontaneous endogenous erythroid colony (EEC) formation, low serum erythropoietin (EPO) levels, and *JAK2* mutations are specific but not sensitive enough to distinguish ET and PV. The combination of *JAK2* mutation and increased erythrocytes ($>6 \times 10^9/L$), haematocrit (>0.51 males and >0.48 females) is diagnostic for PV (specificity 100%, sensitivity 95%) obviates the need of red cell mass measurement. About half of WHO-defined ET and MF patients are *JAK2* positive. According to 2008 ECMP criteria, *JAK2* mutated ET comprises three distinct phenotypes of normocellular ET, ET with increased bone marrow erythropoiesis and hyper cellular ET with megakaryocytic granulocytic myeloproliferative without leuko-erythroblastosis. Low vs. high *JAK2* allele and MPN disease burden in heterozygous ET vs. homozygous PV is of major clinical and prognostic significance. *JAK2* wild type *MPL* mutated normocellular ET is the second distinct MPN. *JAK2/MPL* wild

type hypercellular ET with primary megakaryocytic granulocytic myeloproliferative (PMGM) is the third distinct MPN. *CALR* mutated ET and MF lack PV features in blood and bone marrow. Pre-treatment bone marrow histology distinguishes *JAK2* mutated trilinear MPN from calreticulin (*CALR*) and *MPL* mutated MPN. Increase of clustered large pleomorphic megakaryocytes with hyper lobulated nuclei is similar in *JAK2* ET and PV patients. *CALR* mutated thrombocythemia shows characteristic bone marrow features of primary dual megakaryocytic granulocytic myeloproliferative (PMGM) without features of PV. *MPL* mutated thrombocythemia is featured by large to giant megakaryocytes with hyper lobulated stag horn like nuclei in a normocellular bone marrow without features of PV. Increase of *JAK2*, *CALR* and *MPL* MPN disease burden is related the degree of splenomegaly, myelofibrosis and constitutional symptoms during life-long follow-up. The presence of epigenetic mutations at increasing age predict unfavorable outcome in *JAK2*, *CALR* and *MPL* mutated MPNs. Low dose aspirin in ET and phlebotomy on top of aspirin in PV is mandatory to prevent platelet-mediated microvascular circulation disturbances. Pegylated interferon is the first line myeloreductive treatment option in prodromal and early stage *JAK2* mutated PV and in *CALR* and *MPL* mutated thrombocythemia. Low dose pegylated interferon in symptomatic is the first myeloreductive treatment of choice to postpone or eliminate the use of hydroxyurea as long as possible.

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Cancer cured by bio electron's laser acupuncture

Nick Kostovic

Kostovic Acupuncture by bio Electron's Laser, USA

New advanced technology in medicine by bio electron's photons special circuit, I, Nick Kostovic, for the first time in recorded history have eliminated magnetic from regular electromagnetic electricity. I also created the next six steps described below. I did this by developing a proprietary way of reversed current RC to create what is bio electricity. The device I created is called the Kostovic BioTechnological Energizer, K-BTE Medical Laser Device. First, my center has successfully developed special current circuit and canceled magnetic from electromagnetic. Second, this device extracts bio electron photons from H₂O electric fluid by wire and wirelessly. Third, while using the K-BTE device therapist has absolute control of speed/frequency of these released and enriched bio electron photons. Fourth, bio electrons photons are converted into the strength of micro or nano amperes allowing the bio electricity to softly penetrate into

the brain or any other physical organ with zero harm to the healthy cells. Fifth, in the process of extracting bio electron photons from the electric fluid it can include transference of hundreds of different natural acids as well as amino acids. Each biological agent BA is capable to transfer three to six different natural and amino acids, by enriched bio electron photons. Sixth, these enriched bio electrons photons are wirelessly transferred through and olive oil coating on the skin enabling the bio electricity to softly penetrate/bio electron photons always penetrate softly on the skin surface/ deeply and efficiently targeting the specific ailing human tissue. This process is always skillfully directed into the body with the very gentle frequencies of micro and nano amperes allowing zero risk of negative consequences.

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Estrogen induced oxidative stress, NRF1, tumoral mitochondria and potential therapeutic modalities, literature review

S Silverman

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Breast cancer is one of the most common environmental malignancies and second cause of cancer related death in developed countries. Mitochondria are a “power house” and a “canary in a coal mine” of human cancer cells. NRF1 is a master regulator of mitochondrial biogenesis. Mitochondrial biogenesis and translation are dysregulated in the breast cancer cells; this mitochondrial dysfunction enhances tumorigenicity and metastatic potential. Identifying

therapeutic targets for management of both tumoral mitochondrial biogenesis and mitophagy is critical to suppress tumorigenesis. This literature review summarizes the role of mitochondria in breast cancer, estrogen-induced oxidative stress on NRF1 up regulation with tumoral mitochondrial biogenesis and mitophagy and potential therapeutic modalities.

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Therapeutic patient education: A therapeutic purpose or alternative to conventional therapy for improving the quality of life in patients with type 2 diabetes?

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Therapeutic patient education is the patient's/family's capacity building process on the basis of integrated actions to care project. It is also the set of practices to allow the patient skills, to support actively the illness, care and monitoring, in partnership with the healthcare team. This is a co-construction between the treated and the caregiver, a comprehensive care most optimal in a cognitive behavioral perspective and psycho-emotional through which the evaluation of quality patient's life is paramount.

Introduction: The study DAWN2 France showed that people with diabetes have an impaired quality of life. An alteration efficiency of the management of this pathology. This study also showed that French patients seem more anxious than in most other countries, the fear of hypoglycemia is a very important point, as the fear of injections and that the transition to insulin is seen as a penalty. By giving patients educational sessions, group and individual, medically, dietary, physical, psychological and social, the ETP has significantly improved the management of patients.

Methods: An observational study is to evaluate the evolution of the quality of life and the metabolic balance of a cohort of 100 patients who completed a personal ETP program, developed about 18 educational National Conferences, full hospitalization. A day hospital monitoring is proposed at 3, 6 and 9 months. The desired main criterion is the quality of life. The questionnaire used to assess the quality of life is the SF-36. The biological and anthropometric parameters also measured. The main characteristics of the patients included in this study were: Age between 18 and 70 years; Type 2 diabetes diagnosed for at least 6 months; HbA1c > 7%; BMI > 30; Patient treated by at least two oral anti diabetics; No severe proliferative diabetic retinopathy; associated metabolic syndrome; Lack of thyroid dysfunction; No modification therapy (treatment) for at least 2 months.

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Group B streptococcus infection among pregnant women and neonatal colonization rate in patients from Obafemi Awolowo University teaching hospital complex, South western Nigeria

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Studies in some sub-Saharan African countries like Zimbabwe, Malawi, Kenya and Gambia revealed that Group B *Streptococcus* (GBS) is emerging as the main cause of neonatal sepsis and meningitis. However, in Nigeria, information on GBS disease prevalence remains sparse. We sourced to isolate GBS from the rectovaginal and neonatal samples that were obtained from a tertiary hospital in a populated area of Osun state and give an updated information on the antibiotic susceptibility patterns, using demographic and clinical parameters. One hundred and seventy samples were collected from consenting mothers and neonate from June 2016 to January 2017. Ninety-Eight (98) GBS isolates were recovered from vaginal, rectal of the pregnant woman at the point of labour and Umbilical cord of the neonate within 24hrs of birth. cultures for the isolation and identification of Group B Streptococcus (GBS) were carried out using the CDC recommended microbiological methods. The Kirby Bauer disk-diffusion method was employed to determine antibiograms of GBS isolates in accordance with Clinical and Laboratory Standards institute (CLSI). The presence of resistant genes was examined

using PCR . The prevalence rate of GBS maternal and neonatal colonization were 29.4% and 20.6% respectively while 4% of the colonized neonates had nosocomial GBS colonization. There was no significant association between GBS colonization status and age ($p > 0.05$), parity ($p > 0.05$), obstetric risk factors ($p > 0.05$) and sex of neonate. There was no incidence of GBS infection observed. Resistance to augmentin (88.8%), ampicillin (60.2%), penicillin (47%), tetracycline (34.7%), ceftriaxone (19.4%), clindamycin (13.3%), vancomycin (10.2%) and erythromycin (7.1%) were observed. one of the 8 representatives of the multidrug resistant isolates harboured tetM gene while other resistant genes examined were negative in all MDR isolates. High prevalence of maternal and neonatal GBS colonization has been established among pregnant women and neonates in the study area. Nosocomial infection was implicated in GBS colonization among neonates. However further research is called for using larger sample size and multiple curve studies for adequate extrapolation into the general population.

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Nutrition, cardiovascular disease and genetics: Making a difference

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Introduction: More providers today are seeing and treating patients with obesity, morbid obesity, glucose intolerance, insulin resistance, diabetes, dementia and cardiovascular disease. Out of obesity epidemic came a diabetes epidemic, out of a diabetes epidemic, we are seeing a very serious dementia epidemic. A dietary plan or nutrition therapy for these patients could prove to be a less expensive and more effective approach that addresses all of this disease we are seeing on the frontlines of medicine. The epidemic of cardiac and chronic inflammatory diseases is rampant. Traditional allopathic approaches are confusing, serve to band-aid the problem, and are insufficient to address the complex nature of these diseases, many of which are related to a poor match between nutrition, lifestyle choices and genetics. An understanding of the relationship between the Apo lipoprotein E (APO E) gene, (which transports fat and cholesterol) and nutrition may provide greater insight into how a gene-supportive environment can promote optimal cell health. Utilizing an individual integrative medicine approach which uses and an APO E gene specific anti-inflammatory nutrition plan to create a gene supportive environment for optimal health can be a critical and effective tool. The

methods used for this study include lecture, questions and answer and power point presentation. After attending this presentation, the participant will be able to: Describe the role diet has as a therapeutic tool for heart disease, glucose intolerance, insulin resistance, diabetes, hypertension and obesity. Be aware of a practical nutritional protocol to effectively address the management of patients presenting with: genetic heart disease risk, obesity, diabetes, insulin resistance, glucose intolerance, dementia and hypertension. Understand a one practical effective process of how genetic heart disease, obesity, diabetes, insulin resistance, glucose intolerance, hypertension, dementia may be created and reversed. Recognize key genetic and behavioral components contributing to genetic heart disease, obesity, diabetes, insulin resistance, glucose intolerance, dementia and hypertension. Describe individual dietary differences based on genetic factors and present a practical process to help prevent or regress this "Metabolic Syndrome" types disease states.

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The role of ultrasound elastography in evaluation of breast masses

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Introduction: Elastography is a non-invasive medical imaging technique that detects tumors based on their stiffness (elasticity). Strain images display the relative stiffness of lesions compared with the stiffness of surrounding tissue as cancerous tumors tend to be many times stiffer than the normal tissue, which gives under compression.

Purpose: The purpose of the study is to prospectively evaluate the sensitivity and specificity of the real-time sonoelastography as compared with B-mode US for distinguishing between benign and malignant breast lesions.

Methods: The study was conducted on 80 patients, with 144 lesions and each patient was subjected to complete history taking, thorough clinical examination. Then all patients had conventional US and elastography while 68 patients had mammography.

Results: Among the 80 patients, had sensitivity and specificity of the elastography test in breast lesions according to the elastography score were 80%, 80.95% respectively. While sensitivity and specificity of conventional B mode US were 80%, 76% respectively. Yet the combined B mode US and US elastography showed sensitivity and specificity of 86.6%, and 90.4% respectively.

Conclusion: Elastography is not used independently but in the same session of ultrasound taking about five minutes more than the conventional ultrasound examination as an additional role for conventional ultrasound examination in an attempt to increase and improve the accuracy of diagnostic efficiency assessed by the BIRADs scoring system and not as a separate examination.

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Can we adopt high resolution sonomammography as screening modality in female subjects under 35 years with family history of breast cancer?

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Purpose: The purpose of the study is to assess the role of high resolution ultrasound as an easy safe modality in young age group with high risk factor as family history of breast carcinoma.

Methods & Materials: With Ethics Committee approval the study was conducted on 100 Egyptian women less than 35 years with high risk factor for breast carcinoma. With their ages ranged from 19 years to 35 years with mean age of 26 years.

Results: Lumps were the most presenting complaint in 31% of patients, 17% complained from pain, 5% complained from axillary pain, lastly unilateral nipple discharge was expressed by 3% of patients. The mammographic parenchymal pattern was an extremely dense pattern in 31.81% of studied subjects, 31.81% were heterogeneously dense and in 36.36%

were of scattered fibroglandular pattern. The final diagnosis reached by histopathological examination and follow up was as follows: The most common diagnosis was 23 lesions fibroadenoma. The second most common diagnosis was 13 lesions simple cysts, 5 were malignant, 4 were abscess formation, 9 were fibrocystic changes, 5 ductectasia, 2 sebaceous cysts while galactocele, and focal mastitis and fat necrosis were diagnosed as one lesion for each.

Conclusion: Improvements of high resolution ultrasound equipment help much more in characterization of breast masses considering the reliable signs for differentiating benign from malignant ones. The present study declared and approved high resolution sonomammography as a screening modality in younger high risk females.

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An algorithm to avoid missed open-book pelvic fractures

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Background: In polytrauma patients, to limit the pelvic space favoring internal bleeding, the use of pelvic binders is now a standard practice. In case of external pelvic binder placement with anatomic reduction of the symphyseal and sacroiliac joints, delayed diagnosis and missed injuries could occur.

Aim: The aim of this study was to document the risk of missed diagnosis, as well as to identify a possible algorithm for optimal management of traumatized patients with pelvic binders, in order to reach an early diagnosis of pelvic fractures without additional risks.

Case Report: We report three cases of open book pelvic fractures that were initially missed. The external pelvic

binders applied had adequately reduced the fractures. The computed tomography on arrival excluded a diastasis of the symphysis pubis. On removal of the pelvic binder and repetition of the radiological imaging, the fractures were evidenced.

Conclusions: We have accordingly created an algorithm for polytrauma patients to determine when the pelvic binder should be released prior to radiological imaging and when repeated radiological imaging should be done. The use of this algorithm in trauma centers will help reduce the number of missed injuries and the numbers of late diagnoses as well as increase the patient survival rates.

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State of the art and future of IO in solid tumors: Example breast cancer

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The idea of using the immune system to fight cancer is over 100 years old (Paul Ehrlich's "Magic Bullet"). But immunotherapy in solid tumors (ST) has been disappointing over the last several decades. A new molecular approach led to a better understanding of the immune system. Check point regulation, understanding roles of Tregs, Th1 and Th2, development of CAR-T cells, as well as regulation of DC and Macrophages, has led to discovery of immune checkpoint inhibitors (ICI) and modulators that are currently used in studies of several STs. Positive studies have led to the US

FDA approval of a few of these compounds. Moreover, PD-1 / PDL-1, MSI high (and dMMR), MTB are the currently "best" predictive markers for IO therapy and recently, Pembrolizumab was approved in ST with this companion diagnostic marker. Many large clinical trials in many ST and in all phases are underway (over 1200). We will discuss the mechanism of action, its impact on solid tumors, and some of the early results and next generations ICI.

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Cost-effectiveness of breast cancer screening in Turkey, a developing country: Results from Bahçeşehir mammography screening project

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Objective: We used the results from the first three screening rounds of Bahcesehir Mammography Screening Project (BMSP), a 10-year (2009-2019) and the first organized population-based screening program implemented in a county of Istanbul, Turkey, to assess the potential cost effectiveness of a population based mammography screening program in Turkey.

Materials & Methods: Two screening strategies were compared: BMSP (includes three biennial screens for women between 40-69) and Turkish National Breast Cancer Registry Program (TNBCRP) which includes no organized population based screening. Costs were estimated using direct data from the BMSP project and the reimbursement rates of Turkish Social Security Administration. The life years saved by BMSP were estimated using the stage distribution observed with BMSP and TNBCRP.

Results: A total of 67 women (out of 7234 screened women)

were diagnosed with breast cancer in BMSP. The stage distribution for AJCC stages 0, I, II, III, IV was 19.4%, 50.8%, 20.9%, 7.5%, 1.5% and 4.9%, 26.6%, 44.9%, 20.8%, 2.8% with BMSP and TNBCRP, respectively. The BMSP program is expected to save 279.46 life years over TNBCRP with an additional cost of \$677.171, which implies an incremental cost-effectiveness ratio (ICER) of \$2.423 per saved life year. Since the ICER is smaller than the Gross Domestic Product (GDP) per capita in Turkey (\$10.515 in 2014), BMSP program is highly cost-effective and remains cost-effective in the sensitivity analysis.

Conclusion: Mammography screening may change the stage distribution of breast cancer in Turkey. Furthermore, an organized population-based screening program may be cost effective in Turkey and in other developing countries. More research is needed to better estimate life years saved with screening and further validate the findings of our study.

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Factors affecting breast cancer (BC) treatment delay in Turkey

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Background & Aim: One of the most important reasons of BC mortality is delay in treatment. Due to lack of BC awareness and organized screening programs, total delay time (from first symptoms of BC to initiation of treatment; TDT) is longer in low-middle income countries. The primary goal of this survey was to identify factors affecting TDT in patients with BC.

Methods: As a part of previously presented multinational survey, a total of 1.031 BC patients from 12 cities of 5 districts in Turkey were surveyed using a uniform questionnaire. TDT was determined using 8 individual scales, including one pertaining to patient delay and 7 related to subsequent steps in a typical diagnostic process. Regression models were constructed using 17 variables concerning diverse contextual and personal patient characteristics. Time between first symptom and first medical visit (Patient Delay Time; PDT) and time between first medical visit and start of therapy (System Delay Time; SDT) were modeled separately with multilevel regression.

Results: Mean PDT, SDT and TDT were 4.8, 10.5 and 13.8

weeks respectively, with 42% of the patients with a delay of >12 weeks. Multilevel regression equation indicated that disregard of discovered symptoms ($p<0.001$) and having at least secondary level of education ($p=0.021$) were significantly correlated with longer PDT. Patients with stronger self examination habits ($p=0.009$), reporting more support from friends and family ($p<0.001$) and living in metropolitan areas (>500k) ($p=0.006$) had shorter PDT. Predictors of longer SDT included disregard ($p<0.001$) and having a PDT>4 weeks ($p<0.001$). Shorter SDT was correlated to being older than 60 years of age ($p=0.027$). Results revealed that diagnosis during periodic check-up or opportunistic mammography vs. symptomatic BC ($p<0.001$) and having first medical examination by a surgeon resulted in shorter SDT.

Conclusions: TDT in Turkey is unacceptably long and system delay accounted for a substantial part of the total delay experienced by breast cancer patients. This points to a need for shortening clinical pathways if possible. A long patient delay calls for research into patient awareness of BC.

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