

ACP Michigan Chapter Scientific Meeting 2018

Oral #1

Category: Quality Improvement

Institution: Ascension Crittenton Hospital – Rochester

Program Director: Sarwan Kumar, MBBS, FACP

Presenter: Victoria Gonzalez

Additional Authors: Uchel, T., Al-Fityan, M., Alwash, H., Najji, N., Tegeltija, V., and Kumar, S.

Inappropriate Use of IV Fluid Therapy

Introduction: During observation of patients on the medical floor, it was noted that many were placed on IV fluid (IVF) therapy regardless of the admitting diagnosis. After reviewing the literature, it was concluded that there are clear recommendations for IVF therapy use. Using these indications, this quality improvement project determines the prevalence of inappropriate IVF therapy use and costs incurred.

Methods: Following the IHI model, a chart review of 50 patients identified physicians prescribing IVF therapy and preexisting EMR system order sets as contributors of inappropriate IVF therapy. Using a list of indications, patients were documented as receiving appropriate or inappropriate IVF therapy. The pharmacy later provided the calculated total amount of fluid given to those with no indications for IVF therapy to then calculate the cost incurred by the hospital due to the inappropriate fluid therapy.

Results: Of the 50 reviewed charts, 19 patients (38%) had no indication for IVF therapy yet received about 2.9-liters of fluid during their admission. Each 1-liter of fluids costs about \$10. With about 10 medicine admissions daily, the hospital incurs a total cost of \$290 per day, roughly estimating to about \$104,400 per year.

Conclusion: Prescribing IVF therapy against established guideline recommendations not only costs about \$104,400 yearly, but may also result in complications that would compromise patient safety including pulmonary congestion and hypertension. This project highlights the large percentage of patients prescribed inappropriate IVF therapy with future plans to lessen this burden by educating prescribers and altering the current EMR system.

Institution: Ascension St. John Hospital – Grosse Pointe

Program Director: Raymond Hilu, MD, FACP

Presenter: Ryan Bean

Additional Authors: Joel Topf, MD

ESA-Resistant Hypoproliferative Anemia due to Copper Malabsorption

Introduction: Bariatric surgery predisposes to many vitamin and mineral deficiencies, including copper. Many vital enzymes are copper-containing. Severe copper deficiency presents not only with anemia, but also neuropathy and ataxia, often mimicking iron deficiency and vitamin B12 deficiency, respectively.

Case: A 61-year-old female with end-stage renal disease on hemodialysis, hypothyroidism, and Roux-en-Y gastric bypass (RYGB), presented with fatigue, vision changes, dysgeusia, neuropathic pain, and ataxia. Hemoglobin on admission was 5.9 g/dL, normocytic. Medications included ferrous sulfate, an erythropoietin-stimulating agent (ESA), levothyroxine and vitamin B6. Physical exam was significant for pallor, decreased visual acuity, weakness, and a stocking glove pattern loss of pain, temperature and vibratory sense. Serum iron and saturation were normal. No hemolysis or blood loss present. Serum B12 and folate levels were normal. TSH was elevated with a normal free T4. Vitamins A, D, B1, B6, calcium, zinc and selenium were all within normal limits. Serum copper was 14 mcg/dL (Ref. range 80-155). She received copper IVPG for 6 days normalizing the level and was discharged with a Hb of 7.5.

Discussion: Copper deficiency is an unusual cause of progressive anemia. Ten percent of patients with a RYGB develop copper deficiency. This patient's anemia was paired with myeloneuropathy, associated peripheral neuropathy, disturbing vision changes, and dysgeusia. These symptoms are due to a lack of neurotransmitter synthesis by cupro-enzyme dopamine mono-oxygenase. Ceruloplasmin, also copper-dependent, oxidizes ferrous iron to the ferric form allowing iron transport. Consider copper deficiency in patients with gastric bypass who present with hematologic and neurologic abnormalities.

ACP Michigan Chapter Scientific Meeting 2018

Oral #3

Category: Clinical Vignette

Institution: Ascension St. John Hospital – Grosse Pointe

Program Director: Raymond Hilu, MD, FACP

Presenter: Bassent Botros

Additional Authors: Bassent Botros MD, Tariq Marroush MD, Shyam Moudgil MD, Rajaninder Sharma MD

Acquired Hypocupremia: A Rare, but Preventable Neurologic Complication of Bariatric Gastric Bypass Surgery

Copper is a trace mineral and essential cofactor that is absorbed in the stomach and proximal small intestine. Genetic disorders of copper metabolism including Wilson's and Menke's disease are well established. Acquired copper deficiency is rare and associated with zinc supplementation, malabsorptive conditions and gastric surgery. We present a case of acquired copper deficiency 10 years after bariatric surgery.

Case: A 41-year-old female with a history of bariatric gastric bypass surgery (2006) presented with decubitus ulcer, progressive vision loss, worsening weakness and paresthesia in her extremities. She lost the ability to ambulate over a four-month period and became bedbound. Physical exam revealed optic nerve pallor concerning for optic neuropathy, quadriparesis suggestive of peripheral neuropathy, decubitus ulcer, areflexia and painful paresthesia in the lower extremities extending to the thighs bilaterally. Decreased vibratory sensation and proprioception were also observed. Initial myeloneuropathy work-up revealed normal Folate, Riboflavin and Vitamin B12 levels. MRI of the spine showed small central disc herniation at C4-6 and disc bulging at L4-S1. Further investigation revealed severe copper, zinc and vitamin B6 deficiency. She was started on vitamin B6 and copper replacement.

Discussion: Gastric surgery is associated with neurologic complications due to vitamin and mineral deficiency. 10% of patients who undergo bypass bariatric surgery manifest symptoms of copper deficiency and present with anemia and neurological abnormalities including ataxia, myelopathy, and peripheral neuropathy. Copper supplementation is the treatment of choice. While hematologic complications resolve within months of treatment, neurologic manifestations may persist or require a longer duration of treatment.

ACP Michigan Chapter Scientific Meeting 2018

Oral #4

Category: Quality Improvement

Institution: Ascension Crittenton Hospital – Rochester

Program Director: Sarwan Kumar, MBBS, FACP

Presenter: Neeharika Ralh

Additional Authors: Toribiong Uchel, M.D., Daniel Kapadia, M.D., Shaniwaz Labana, M.D., Victoria Gonzalez, M.D., Zain Kulairi,

Permissive Hypothermia: How Cold Is Cold Enough?

Introduction: Anoxic brain injury causes 50% of deaths in post-cardiac arrest patients. Hypothermic therapy to a body temperature of 32-34°C was found to decrease mortality and improve neurological function by nearly 50%. Despite favourable outcomes, there are several exclusions to the therapy including multiple vasopressors and coagulopathies. Later, studies revealed that targeting 36°C was non-inferior to 33°C, called permissive hypothermia (PH). In 2012-2015, 35 post-cardiac arrest patients with successful return of spontaneous circulation (ROSC) were identified, 27 received cooling to 32°C, while 8 went without. The first PDSA cycle placed a PH order-set in the facility's EMR, nonetheless patients remained excluded. The second PDSA cycle aimed to decrease the number of post-cardiac arrest patients with successful ROSC who went without cooling therapy by 80% in 2017.

Methods: Following the IHI model, emergency department, intensive care unit and resident physicians were educated on guidelines for post-cardiac arrest care, including the importance of the hypothermia protocol now incorporating PH.

Results: In 2017, all 36 post-cardiac arrest patients achieving ROSC underwent active cooling, of which 30 were traditionally cooled and 6 had PH. Zero patients were excluded, resulting in a 100% decrease in those who went without neuroprotection.

Conclusion: Despite surpassing the goal of reduction by 80% of patients who went without hypothermia therapy by enrolling them in PH, all 6 patients had poor outcomes resulting in brain death and terminal weaning. Future PDSA cycles will review our PH protocol compared with national guidelines, with hopes of achieving desirable outcomes in those treated.

ACP Michigan Chapter Scientific Meeting 2018

Oral #5

Category: Clinical Vignette

Institution: Ascension St. John Hospital – Grosse Pointe

Program Director: Raymond Hilu, MD, FACP

Presenter: Baker Hillawy

Additional Authors: Elizabeth Bankstahl

Catecholamine Secreting Glomus Tympanicum Discovered on a Routine Complete Physical Exam

Introduction:

Glomus tumors occur with an estimated annual incidence of 1 per 1.3 million people. Although rare, glomus tumors are the most common tumor of the middle ear. They are histologically benign, slow growing, locally destructive. The most common presenting symptoms are conductive hearing loss and pulsatile tinnitus. Less than 25 cases of catecholamine-secreting glomus tumors have been reported.

Case presentation:

43 years old female with a medical history of essential hypertension came in to our office for a routine complete physical exam. Patient had no symptoms at the time of examination. Otoscope examination was performed and revealed a questionable middle ear mass versus hemangioma on the right eardrum. The patient was referred to ENT. CT with contrast of the internal auditory canal showed a small soft tissue density attached to the promontory near the basal turn of the cochlea on the right side. Laboratory testing showed increased urinary Metanephrine and Vanillylmandelic acid, yet the patient had no symptoms or signs related to increase catecholamines except for high blood pressure.

Patient had successful surgery with removal of the tumor.

Discussion:

The case highlights the importance of complete physical exam with otoscopy and fundoscopy and how they are often neglected by physicians.

Paragangliomas are highly vascular tumors that are typically associated with blood vessels. Treatment involves either conservative observation, conventional microsurgery, or stereotactic radiosurgery. Simple observation with serial MRI scanning is warranted for tumors that are identified incidentally and are small and non-symptomatic.

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Oral #6

Category: Clinical Vignette

Institution: Ascension St. John Hospital – Grosse Pointe

Program Director: Raymond Hilu, MD, FACP

Presenter: Safa Maki

Additional Authors: KEith Bellovich, DO, FACP

The Benefit of Implementing Plasmapheresis and Rituximab Promptly in the Management of Granulomatosis with Polyangiitis

Introduction: Granulomatosis with polyangiitis (GPA) is a rare and potentially fatal necrotizing vasculitis involving respiratory and renal capillaries. Classical treatment consisted of high dose corticosteroids with cyclophosphamide. We here present a case of favorable outcomes applying results from MEPEX and RAVE trials that expanded treatment options to include plasmapheresis and rituximab.

Case: A 27 yo Caucasian male presented with a month of hemoptysis, cough, dyspnea, hematuria, malaise and weight loss. Physical exam was significant for tachycardia, fatigue, pallor and diffuse bilateral coarse ronchi. His initial hemoglobin and creatinine were 5.1 and 3.6 mg/dL, respectively. Chest CT showed bilateral pulmonary nodules and diffuse infiltrates. Urine sediment revealed proteinuria with numerous RBC casts. Eventually, c-ANCA and IPR3 titers were positive and kidney biopsy confirmed GPA diagnosis. Our treatment included intravenous corticosteroids, seven sessions of plasmapheresis and rituximab on days #4 and #10 resulting in symptomatic improvement within days and recovery of hemoglobin and creatinine to baseline within two months.

Discussion: The serious complications of GPA like pulmonary hemorrhage or end-stage renal disease can be prevented with prompt diagnosis and treatment. MEPEX trial supported that early plasmapheresis produces a better renal outcome and RAVE trial deemed rituximab to be non-inferior to cyclophosphamide in obtaining disease remission. The response, in this case, indicates that combining these two can achieve successful outcomes despite pharmacokinetics suggesting that up to 50% of rituximab may be removed by plasmapheresis. We still need more robust studies of the pharmacokinetics to identify the ideal treatment sequencing.

ACP Michigan Chapter Scientific Meeting 2018

Oral #7

Category: Clinical Vignette

Institution: Authority Health – Detroit – Family Medicine

Program Director: Marjan Moghaddam

Presenter: Fatima Younus

Additional Authors: Paramveer Singh, MD (Resident); Anfal Fahim, MD (Resident); Dr. Mohamed S. Siddique MD, FACP

A Case of Thoracic Endometriosis Syndrome Presenting with Recurrent Catamenial Pneumothorax

Introduction: Catamenial pneumothorax (CPT) is the recurrence of two or more pneumothoraces in conjunction with the menstrual cycle, usually occurring on the right side and is found in women between the ages of 30-40. In 50-80% of cases, there is a concomitant diagnosis of endometriosis, called thoracic endometriosis. VATS (video-assisted thorascopic surgery) is used to visualize endometrial tissue in the lungs, pleura, or diaphragm and a biopsy finding endometrial tissue can lead to a definitive diagnosis of CPT. This case report shows the importance of early diagnosis and prompt treatment of catamenial pneumothorax.

Case Description: A 29 year old female presented with complaints of sharp chest pain, pressure, tightness, and shortness of breath which began abruptly. She noted that she had similar symptom presentation 1.5 years prior when she was first diagnosed with CPT and since then, has been taking Depo-Provera shots once every three months for control of her endometriosis. Upon admission, CT scan of the thorax showed a 10% R-side pneumothorax and even with the insertion of an 8-fr chest tube, repeat chest x-rays did not show any improvement. A right sided thoracotomy with pleurodesis was performed during which they discovered a leaking bleb and a RLL wedge was resected. To control for future pneumothoraces, leuprolide was initiated to manage her endometriosis.

Discussion and Conclusions: CPT can be associated with high risk complications primarily due to failed hormone therapies leading to life-threatening recurrent pneumothoraces. Promptly initiating appropriate therapy for endometriosis is essential to prevent recurrent pneumothoraces.

ACP Michigan Chapter Scientific Meeting 2018

Oral #8

Category: Research

Institution: Hurley Medical Center/MSU – Flint
Program Director: Ghassan Bachuwa, MD, FACP
Presenter: Yanal Alnimer
Additional Authors: Dr Ghassan Bachuwa.

The Effect of Perioperative Bevacizumab on Disease Free and Overall Survival in HER-2 Negative Breast Cancer

Introduction: Neoadjuvant chemotherapy has been widely used for locally advanced breast cancer. Artemis, Geparquinto, NSABP-B40 and CALGB (4063) found that adding Bevacizumab to neoadjuvant chemotherapy increases the pathological complete response in HER-2 negative breast cancer. We conducted this meta-analysis to evaluate the effect of adding Bevacizumab in the perioperative period on disease free and overall survival in HER-2 negative breast cancer. Methods: We performed a systematic search for randomized control trials (RCT) measuring the effect of perioperative Bevacizumab on disease free survival and overall survival. The Mantel-Haenszel method and Random effect model were used to analyze the data. A total of 3909 patients of the 3 randomized controlled trials (Artemis, Geparquinto, NSABP-B40) were included in the meta-analysis for disease free survival, while 3911 patients of the same RCT were included in overall survival analysis. The same trials were included in the sub-analysis for hormonal receptors positive tumors, while Beatrice trial was added in triple negative breast cancer sub-analysis. Results: No statistically significant difference was found after adding Bevacizumab to standard chemotherapy in disease-free survival for the overall population, hormonal receptor positive and negative tumors with a HR 0.98 (0.86-1.12), HR 0.99 (0.82-1.20) and HR 0.93 (0.81-1.06) respectively. In similar, no statistically significant improvement in overall- survival after adding bevacizumab in the overall population, hormonal receptor positive and negative tumors with a HR 0.9 (0.76-1.06), HR 0.99 (0.82-1.20) and HR 0.94 (0.8-1.10) respectively. Conclusion: No survival benefit was found after adding bevacizumab to standard chemotherapy in locally advanced breast cancer

ACP Michigan Chapter Scientific Meeting 2018

Oral #9

Category: Quality Improvement

Institution: Ascension Crittenton Hospital – Rochester

Program Director: Sarwan Kumar, MBBS, FACP

Presenter: Jacob Salman

Additional Authors: Alicja Sobilo, Daymon Peterson, Vesna Tegeltija, Ian Ross, & Sarwan Kumar

Inappropriate Use of IV Anti-Hypertensives

Introduction: There are no clear guidelines for the use of IV anti-hypertensives (IVAH) in the hospital for asymptomatic hypertension. Studies have shown aggressive treatment leads to complications like hypotension and acute kidney injury. Ambiguity of when to use IVAHs prompted two PDSA cycles focused on education. A third PDSA focused on EMR checkpoints is currently underway.

Methods: Over a three-month period 4 years ago, a retrospective chart review of 134 hospitalized patients who received IV Labetalol, Enalapril, and Hydralazine was done. Excluded were hypertensive emergency, stroke and NPO patients. One third of patients suffered adverse effects, with over 80% of these patients having oral options available. The goal was to decrease use by 25% within three months of intervention with education and this goal was well surpassed. Intervention included two rounds of education to physicians, nurses and pharmacy. The second PDSA continued with special attention to resident education, yielding 100% compliance after intervention.

Results and Discussion:

The third PDSA focuses on reducing IVAH use with EMR checkpoints for all ordering individuals which will reach all medical staff. So far with education alone we saw a total decrease from 1,112 to 278 total doses given over the three-month period.

We estimate 100% compliance by both residents and physicians can be achieved, producing huge impacts on the culture of anti-hypertensive use in the hospital. We have already seen outstanding results. By continuing to decrease the use of IVAH, we anticipate to eliminate adverse side effects and improve patient safety and hospital cost.

ACP Michigan Chapter Scientific Meeting 2018

Oral #10

Category: Clinical Vignette

Institution: Ascension St. John Hospital – Grosse Pointe

Program Director: Raymond Hilu, MD, FACP

Presenter: Zachary Pounders

Additional Authors: Fawad Shahid, MD; Rajaninder Sharma, MD

Mediastinal Plasmablastic Lymphoma: An Extremely Rare Initial Presentation of AIDS

HIV-associated lymphoproliferative disorders are a heterogeneous group of diseases that arise in the presence of HIV-associated immunosuppression, among the rarest of which are plasmablastic lymphomas, representing only 2-4% of HIV-associated lymphomas. A 58-year-old African American male presented to the emergency department with acute hypoxic respiratory failure. Physical exam demonstrated absent breath sounds on the right, coarse ronchi on the left, and clubbing of the nails. Imaging of the chest revealed a large mediastinal mass completely obstructing the right mainstem bronchus. Biopsy of the mass confirmed diagnosis of plasmablastic lymphoma. Due to high association of this tumor with HIV, patient was subsequently tested and found to be positive for HIV-1 with a CD4 count of 13 and viral load of 46,700. Chemotherapy utilizing EPOCH with bortezomib was initiated and the patient was scheduled to follow up as an outpatient to begin HAART. This case illustrates an atypical presentation of a rare AIDS-associated malignancy as the first presenting sign of disease. It is vital for the practicing internist faced with a new diagnosis of lymphoma to be conscious of lymphoproliferative disorders as the first presenting sign of HIV infection and so as not to overlook a crucial factor in treatment. Prognosis for patients with plasmablastic lymphoma is poor with a median survival of 3 months for HIV positive patients. Due to the rarity of this entity, there is little consensus regarding guideline directed therapy. However, early recognition of HIV and initiation HAART has been demonstrated to improve outcomes.

ACP Michigan Chapter Scientific Meeting 2018

Oral #11

Category: Research

Institution: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Kaitlin Liroff

Additional Authors: Khasawneh, Majd, MD; Halalau, Alexandra, MD, FACP; Munoz-Maldonado, Yolanda, PhD

The Impact of Anxiety and Depression on Frequency to Follow-Up

Introduction

Mental health issues are common in the general population and cause a significant amount of days lost to disability. The primary purpose of this study is to investigate how diagnoses of anxiety and depression affect likelihood to follow up in a general medicine clinic. Our hypothesis is that patients with ICD-10 diagnoses of anxiety and depression will follow up less frequently than patients without.

Methods

This was a retrospective chart review including patients seen in the internal medicine outpatient clinic from June 2014 to June 2017. Patients were separated into three groups by ICD-10 codes: anxiety, depression, and anxiety and depression. They were then matched and compared to the general clinic population without these diagnoses via propensity matching based on: age, gender, race, and modified Charlson comorbidity index (CMI). Appointment frequency determined frequency of follow up.

Results

There were 6,193 patients included in our analysis, 6.4% with anxiety, 9.3% with depression, and 6.3% with both. Using the chi-square test, female gender, Caucasian race, and higher CMI score were associated with increased likelihood to be diagnosed with mental illness ($p < 0.001$). ICD-10 diagnosis did not have any effect on follow-up.

Conclusion

Our data demonstrated decreased rates of depression and anxiety than estimates of the general population. It is possible that the lack of a significant relationship between ICD-10 diagnoses of these disorders and follow up may be indicative of under recognition of anxiety and depression, which has important implications for treatment of these disorders.

ACP Michigan Chapter Scientific Meeting 2018

Oral #12

Category: Research

Institution: Beaumont Hospital – Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Sarah Hartkop
Additional Authors: Alexander Halalau, MD

The Impact of a 30-day Digital Personalized Recovery Support Intervention (Workit) on Patients Indicating Substance Abuse

Introduction: 80 million Americans fall into the category of risky substance use, defined as those who use alcohol and drugs in ways that threaten public health and safety. Despite staggering prevalence and exuberant cost, our healthcare system leaves a person with such behaviors few discrete and affordable options. Our goal was to identify the prevalence of substance abuse in our clinic and ascertain if a personalized digital tool aids in impacting risky behaviors.

Methods: All patients aged 18-40 who presented to the Beaumont Outpatient Clinic during a one-year period were eligible for enrollment. Each patient received two validated screening surveys: WHO quality of life (QOL) and ASSIST survey regarding substance usage. Those that screened positive for risky substance use were emailed a personalized login to enroll in the Workit program, an online platform that engages patients in exercises and provides 24-hour a day live chats with licensed counselors. At the end of 30 days, patients were resent the screening surveys. Data was collected in regards to prevalence of patients with risky substance use, exercises and chats from the Workit platform, QOL differences between those screening positive and negative and comparison of QOL after Workit.

Results: 174/288 (60.4%) of patients screened positive and 114/288 (39.6%) screened negative for risky substance usage. Final data analysis will be available soon.

Conclusions: There is a staggering amount of patients in our clinic population with substance abuse issues and further investigation is warranted into digital programs to aid with addiction.

ACP Michigan Chapter Scientific Meeting 2018

Oral #13

Category: Research

Institution: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Hira Iftikhar

Additional Authors: Chengda Zhang, M.D., Girish B. Nair, M.D. FACP, FCCP.

Role of Respiratory Pathogens in Disease Outcomes in Hospitalized Patients with Interstitial Lung Disease

Increased bacterial burden and changes with respiratory microbiome have been identified as a predisposing factor in the disease progression and acute exacerbation of interstitial lung diseases (ILD).

We performed a retrospective analysis of all patients with ILD admitted from Jan 1st, 2010 to Dec 31st, 2016 at a large tertiary care academic center in Michigan. Data regarding respiratory culture specimen was extracted. Bacterial pathogens were divided into four different groups: (1) *Pseudomonas Aeruginosa* (PA), (2) Methicillin Resistant *Staphylococcus Aureus* (MRSA), (3) Other Gram-negative bacteria (excluding *Pseudomonas Aeruginosa*) and (4) Other Gram-positive (excluding MRSA).

A total of 789 inpatient visits were made by 472 distinct patients. 170 different cultures were collected. Use of immunosuppressant medications or anti-fibrotics did not influence the development of resistant pathogens. Patients who had MRSA and Gram-negative isolates (excluding *Pseudomonas Aeruginosa*) from respiratory culture had a higher 30-day mortality. On multivariate logistic regression analysis, patients with Gram-negatives, excluding *pseudomonas*, had a higher mortality and an increased ICU admission even after adjustment for the other variables including type of ILD, age, gender, comorbid conditions and smoking history.

Conclusion

- The presence of Gram-negative bacteria, excluding *pseudomonas*, is a risk factor for adverse events including higher mortality, ICU admission, and vasopressor use in hospitalized ILD patients.
- Our findings are surprisingly contrary to the common perception of multi-drug resistant pathogens and associated mortality.

Institution: Wayne State University – Detroit

Program Director: Jarrett Weinberger, MD, Member

Presenter: Khaled Janom

Additional Authors: Nadine Abdallah, Amjad Kanj, Jarrett Weinberger

Symptomatic Hypomagnesemia in a Patient with Chronic PPI Use

Hypomagnesemia occurs in less than 2% of the general population. Severe hypomagnesemia can have detrimental cardiovascular and neurologic effects making early recognition crucial. Proton pump inhibitors (PPI) are generally well tolerated and have an excellent safety profile which has contributed to an increase in their use over the past decade. Here, we report a case of severe symptomatic hypomagnesemia induced by chronic PPI use.

A 53-year-old man with coronary artery disease presented with a 3-day history of perioral numbness, peripheral paresthesia, locking sensation in his fingers and occasional tremors. He also reported polydipsia, polyuria, and shortness of breath of one month. Review of systems was otherwise unremarkable. He had multiple ED visits previously for similar complaints which improved with magnesium replacement. Vitals signs were normal. Physical exam showed no neurological deficits. Labs were significant for severe hypomagnesemia [Mg]=0.4 mg/dL, hypocalcemia [Ca]=6.6 mg/dL, and hypokalemia [K]=3.0 mMol/L. ECG was normal. His medications included omeprazole which he had been taking for 10 years. The patient's symptoms drastically improved with electrolyte repletion. Initial investigations did not reveal abnormally increased urinary loss leading clinicians to postulate that PPI use lead to low absorption with resultant hypomagnesemia. Omeprazole was subsequently discontinued. Clinicians should be aware of this side effect of PPI as it has potentially lethal consequences if left untreated. PPI should be limited to patients with clear indications and their use should be reassessed during every clinic visit. Few cases have been reported in literature and data is scarce regarding the association or pathophysiology.

ACP Michigan Chapter Scientific Meeting 2018

Oral #15

Category: Clinical Vignette

Institution: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Ramy Mando

Additional Authors: Richard Bloomingdale, Daniel Ezekwudo

Cardiotoxicity in a Patient Treated for Osteosarcoma: The Result of High Dose Methotrexate, Low Doses of Doxorubicin or Both?

Cardiotoxic effects of anthracyclines are related to cumulative doses of therapy. We describe a unique case in which a patient who received high dose methotrexate and low doses of doxorubicin developed cardiomyopathy.

A 35-year-old female presenting for two-years of progressive right sided knee pain was found to have a 9.0 x 7.0 x 10.0 cm mass on the distal femur. Treatment included a combination of methotrexate, doxorubicin, and cisplatin with cumulative doses of 28.4 g/m², 228 mg/m², and 366 mg/m², respectively. There was minimal tumor response to chemotherapy. Prior to therapy, ejection fraction by two-dimensional echocardiogram was 66%. One month after therapy, the ejection fraction was 15-20%. The patient became hemodynamically unstable requiring chemical and mechanical support to proceed with femur resection. Tissue margins were negative for histologic evidence of metastasis. Patient was transferred to an outside facility for further management of biventricular heart failure. A myocardial biopsy obtained did not reveal any changes to suggest myocarditis. The specimen was free of changes consistent with doxorubicin toxicity including myocytolysis, patchy myocardial necrosis and myocardial fibrosis. Post-operative course of left and right ventricular assistive device placement was complicated by respiratory failure and rapidly deteriorating mental status. Computed topography revealed massive intracranial hemorrhage. Given the assistive ventricular devices, anticoagulation could not be reversed. Patient expired shortly after.

The combination of anthracyclines with other chemotherapeutic agents may lower the cumulative dose of anthracyclines generally considered “safe”. Additional investigation to assess if there is synergistic cardiotoxicity with these agents is warranted.

Institution: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Fadi Odish

Additional Authors: Ahmed Edhi MD, Mitchell Cappell MD

Clarithromycin Induced Acute Liver Injury (ALI)

Clarithromycin is widely used to treat respiratory, skin, and soft tissue infections. Although elevated liver enzymes and cholestatic hepatitis have been infrequently reported, comprehensive literature review reveals only 6 cases of clarithromycin-induced ALF. 60-year-old male presented to the hospital with asthma exacerbation. Clarithromycin, prednisone and albuterol inhaler were prescribed, and he was discharged. Ten days later, he presented and examination revealed stable vital signs but soft, diffusely tender abdomen with hypoactive bowel sounds and no peritoneal signs. Laboratory analysis revealed WBC=12.2bil/L, hemoglobin(hb)=14.5 g/dL and platelets=129bil/L, lipase=33 U/L, lactate=0.6 mmol/L, ammonia=22 mcmol/L and normal coagulation profile. His LFT's trended up during the hospitalization. CT of the abdomen with contrast, abdominal ultrasound and echocardiography were all normal. Viral hepatitis panel and autoimmune work up were negative. On the third day, he developed altered mental status; Hb dropped to 5.5 g/dL, platelets dropped to 35 bil/L and LFTs worsened. Liver biopsy was canceled due to hemodynamic instability and coagulopathy. Massive transfusion was initiated, but despite aggressive resuscitation he suffered cardiac arrest and expired. Autopsy histopathology revealed diffuse hepatocellular necrosis with sparing of periportal hepatocytes consistent with idiosyncratic drug induced liver injury (DILI). There was no lobular or portal inflammation, fibrosis, viral cytopathic effect, thromboemboli, or malignancy. Eosinophils in the portal tract or lobules can suggest a drug-induced hypersensitivity reaction but are rarely seen in cases of idiosyncratic drug reactions. There are no pathognomonic histopathologic findings of DILI and a high index of clinical suspicion in with histopathologic findings are needed for the diagnosis.

Institution: Beaumont Hospital – Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Elisa Quiroz
Additional Authors: Adam Hafeez, Zhou Yu

Primary Cardiac Lymphoma

Primary cardiac lymphoma (PCL) is a rare condition described as a lymphoma localized to the heart or pericardium. Although cardiac involvement is seen in 10-20% of non-Hodgkin's lymphomas, PCL is extremely rare. It comprises merely 0.5% of all lymphomas and 1.3–2% of cardiac malignancies. Clinical presentation typically correlates with the cardiac region involved. As in the case of our patient, malignant pericardial effusion presents classically with chest pain and dyspnea. It is often a clinical emergency as PCL commonly presents with heart failure, cardiac tamponade, or arrhythmia.

An 85-year-old female presented with complaint of dyspnea and chest pain. Chest CT revealed a pericardial effusion and subsequent echocardiogram demonstrated a large circumferential effusion with respiratory variation concerning for impending cardiac tamponade. She was admitted to the intensive care unit and underwent emergent pericardiocentesis. Flow cytometry of the fluid revealed monoclonal B-cells with significant large cell component. Overall morphologic and immunophenotypic features were consistent with high grade B-cell lymphoma with t(8;14). Bone marrow biopsy demonstrated <1% of monotypic B-cells confirming the diagnosis of high grade B-cell lymphoma. The patient was started on rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone (R-CHOP) with excellent response. She was transferred out of the ICU within days and discharged home for outpatient follow up.

Primary cardiac lymphoma is a rare entity and early detection is essential to avoid potentially fatal complications. Prognosis is highly dependent on the management of cardiac complications. The etiology of PCL is still unknown and molecular characterization has yet to be studied.

ACP Michigan Chapter Scientific Meeting 2018

Oral #18

Category: Clinical Vignette

Institution: Western Michigan University School of Medicine – Kalamazoo

Program Director: Joanne Baker, DO, FACP

Presenter: Michael Reaume

Additional Authors: Mridul Parmar, MD; Mark Schauer, MD

Sunitinib-Induced Pneumatosis Intestinalis in a Patient with Multiple Malignancies

Sunitinib is a multi-tyrosine-kinase inhibitor that is an approved therapy for gastrointestinal stromal tumor (GIST). A side effect sparsely documented in case reports is pneumatosis intestinalis (PI). We present a case of sunitinib-induced PI in a patient with multiple malignancies.

A 66-year-old female presented to the ED with abdominal pain and diarrhea. Her medical history included metastatic breast cancer and recurrent GIST, for which sunitinib was added five months prior to presentation. The patient was afebrile and hemodynamically stable, with no peritoneal signs. Imaging revealed PI involving the distal ileum and proximal colon. She was taken for exploratory laparotomy and found to have bowel crepitance, though the bowel was viable and without perforation. The abdomen was closed without intervention. Sunitinib was stopped and the patient made a complete recovery, with resolution of the CT findings.

A small but growing body of evidence demonstrates PI as a side effect of sunitinib. The pathogenesis is likely related to its activity against vascular endothelial growth factor (VEGF), and has been proposed to be a potential class effect of all anti-VEGF agents. These agent's effect on capillary beds can lead to intestinal wall microperforation over time, and as such it is consistently documented that PI tends to occur after several months of sunitinib exposure. PI is associated with both benign and life-threatening conditions. In benign causes, conservative management is preferred. Increasing awareness of sunitinib as a cause of PI may reduce unnecessary surgical procedures, particularly in patients without peritonitis or hemodynamic instability.

ACP Michigan Chapter Scientific Meeting 2018

Oral #19

Category: Research

Institution: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Ahmad Said

Additional Authors: Scott Keeney, D.O., Marsel Matka, M.D., Adam Hafeez, M.D., Bhavinkumar Dalal, M.D., Julie George, Lihua Qu, M.D., Alexandra Ha

Concomitant Use of Direct Oral Anticoagulants and Aspirin in Atrial Fibrillation and Flutter

3% of adults in the USA have atrial fibrillation (AF)¹, which is associated with 1.5 and 1.9-fold increased mortality in men and women, respectively². Direct oral anticoagulants (DOACs) are increasingly used for stroke prevention in AF. An observational study showed that combining antiplatelets and warfarin in stable coronary artery disease CAD and AF resulted in similar ischemic events and more bleeding³. We hypothesize that the concurrent use of DOACs and aspirin in patients with AF and a high stroke risk based on CHA₂DS₂-VASc scores will result in less major adverse cardiovascular events (MACE) compared to DOACs alone.

This is a retrospective cohort study with at least two-year follow up. Patients with AF or atrial flutter (AFL) started on a DOAC between 2/19/2010 and 9/1/2015 at Beaumont Health System were identified. The population was stratified into two groups based on the presence or absence of concurrent aspirin use. The outcomes of interest were ischemic strokes, acute coronary syndromes, all-cause mortality, cardio-embolic events, and bleeding. Multivariate proportional hazards regression model will be used to evaluate time to first event. Propensity score matching will be used to make the groups statistically similar.

7,454 adults with AF or AFL on a DOAC were identified after excluding patients with valvular AF, a history of venous thromboembolism, and those taking P2Y₁₂ inhibitors. 3,638 subjects were taking aspirin and 3,816 were not (control). Outcomes are obtained by querying hospital admission and discharge diagnoses. Statistical analysis is in process and expected to be completed soon.

ACP Michigan Chapter Scientific Meeting 2018

Oral #20

Category: Research

Institution: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Christopher Willner

Additional Authors: Mohammad M Chisti, MD; Michaela Soriano

Analyzing How Elderly AML Patients are Treated, an Institutional Experience

Treatment of acute myelogenous leukemia (AML) remains a challenge in elderly populations, those with comorbid conditions, and patients with poor performance status indices. The optimal choice for induction therapy as well as further agent selection is unclear, and current guidelines recommend enrollment in a controlled clinical trial.

Institutional cases of AML via an electronic medical record query performed in November 2017 containing cases of AML in patients 65 years of age or greater from 01/01/2000 to 06/21/2017 were extracted. Instances of acute myelogenous leukemia were identified by ICD codes. Age, gender, induction therapy, cytogenetics, molecular analyses, and overall mortality were collected.

A total of 144 cases of AML in patients aged 65 or greater were identified, with those having incomplete data being excluded from analysis. The mean age of included patients was 78.3 years of age, 80 were male and 64 were female. 31 in-hospital confirmed deaths were observed, and 27 patients were enrolled into hospice. 59 patients received conventional 7+3, 4 received gemtuzumab-ozogamicin (GO) alone, 31 received a hypomethylating agent (HMA) alone (decitabine or azacitadine), and 7 received a HMA and GO. The mean age of patients that received conventional 7+3 was 72.88 years.

Our institutional data regarding immediate hospital related mortality showed 21.5% in-hospital mortality, which reasonably reflects national / SEER data, with a 30-day mortality rate of 15%. One institution treated 51.4% of patients >65 years of age with 7+3, while 40.9% of our patients were treated with 7+3.

ACP Michigan Chapter Scientific Meeting 2018

Oral #21

Category: Research

Institution: Henry Ford Allegiance Health

Program Director: Vivek Kak, MD, FACP

Presenter: Ahmed Altibi

Additional Authors: Ahmad Masri, Sebhat Erqou, Mohammad Zmaili, Ala Saleh, Raed Al-Adham, Karam Ayoub, Moaaz Baghal, Laith Alkukhun, Amr Barakat dsd

Effectiveness of Wearable Cardioverter Defibrillator in Preventing Sudden Cardiac Death: A Pooled Analysis of 32,400 Patients

Background: Observational studies on the role of the wearable cardioverter-defibrillator (WCD) in preventing sudden cardiac death (SCD) provided conflicting data. The VEST trial was the first randomized controlled trial (RCT) showing no reduction in SCD as compared to medical therapy only. To clarify these uncertainties, we synthesized available evidence on the use of WCDs and a wide range of clinical outcomes.

Methods: We searched PubMed, EMBASE, and Google Scholar for studies reporting on the outcomes of patients wearing WCD from January 2001 through March 2018. The main outcomes were rates of appropriate and inappropriate WCD therapies. Secondary outcomes included incidence of death while wearing WCD and WCD shock failure rate.

Results: Twenty-eight studies were included (32,426 patients, 27 observational, 1 RCT-WCD arm). The overall incidence of appropriate WCD therapy was 5 per 100-person over 3 months (95% CI 3.0-6.0). The incidence of inappropriate therapy was 2 per 100-person over 3 months (95% CI 1.0-3.0). Mortality while wearing WCD was very low; 0.7 per 100-person over 3 months (95% CI 0.3-1.7). Appropriate shocks incidence varied based on the etiology of cardiomyopathy (Ischemic>non-ischemic>Mixed). VEST trial reported lower average daily wear-time of WCD and the lowest incidence of appropriately treated patients (1 per 100-persons over 3 months) compared to observational studies (11 per 100-person over 3 months).

Conclusion: The rate of appropriately treated WCD patients over 3 months of follow-up was substantial; higher in observational studies compared to VEST trial. More RCTs are needed to justify continued use of WCD in primary prevention.

ACP Michigan Chapter Scientific Meeting 2018

Oral #22

Category: Research

Institution: Michigan State University – East Lansing

Program Director: Supratik Rayamajhi, MD, FACP

Presenter: Varunsiri Atti

Additional Authors: Mark Terence Mujer MD, Layan Elkhatib MD, Sowmika Rao MD, Shiva Shrotriya MD, Supratik Rayamajhi MD

Surgical Left Atrial Appendage Occlusion During Cardiac Surgery: A Systematic Review and Meta-Analysis

The left atrial appendage is a common site for the formation of thrombi in patients with atrial fibrillation (AF). Concomitant surgical left atrial appendage occlusion (s-LAAO) during cardiac surgeries can reduce the risk of embolic events; however, there is limited data supporting its regular use.

We performed a comprehensive literature search through March 1st 2018 for all eligible studies comparing s-LAAO versus no occlusion in patients undergoing cardiac surgeries. Clinical outcomes included postoperative embolic events, postoperative stroke, early all-cause mortality, postoperative atrial fibrillation, and reoperation for bleeding and complications. We further stratified the analysis based on propensity matched studies and AF predominance.

Ten studies (n=16,403) met the inclusion criteria. s-LAAO was associated with lower risk of postoperative embolic events (OR: 0.63, 95%CI: 0.53 to 0.76; p< 0.001) and early all cause mortality (OR: 0.37, 95%CI: 0.24 to 0.57, p< 0.0001). s-LAAO was associated with trend towards lower risk of postoperative stroke (OR: 0.68, 95%CI: 0.46 to 1.02, p= 0.06). Stratified analysis demonstrated this association was more strong in AF predominant strata. There was no difference in risk of complications and reoperation for bleeding.

s-LAAO was associated with lower risk of follow-up embolic events, stroke and mortality without any increase in adverse events. Further randomized trials to evaluate long term benefits of s-LAAO are essential.

ACP Michigan Chapter Scientific Meeting 2018

Oral #23

Category: Research

Institution: Michigan State University – East Lansing

Program Director: Supratik Rayamajhi, MD, FACP

Presenter: Manoj Rai

Additional Authors: Enofe Ikponmwosa, Prabhjot S. Bedi, Divyesh Nemakayala, Samanjit K. Kandola, Xiao Ling, Heather Laird-Fick, Marwan S. Abougergi

In-Hospital Resource Utilization and Treatment Outcomes Among Patients with Gastric cancer: A Nationwide Analysis

Introduction: Gastric cancer is the fifth most common cancer in the United States. We sought to determine the frequency of hospital admissions, in-hospital treatment outcomes and resource utilization among patients with gastric cancer.

Methods: This is a retrospective cohort study using the 2014 National Inpatient Sample. The primary outcome was the number of admissions per year. The secondary outcomes were Patients' demographic characteristics, Most common 5 reasons for admission, In-hospital mortality, and in-hospital resource utilization.

Results: There were 43,365 admissions with gastric cancer. The most common principal diagnoses for admission were: Gastric cancer, Gastric cancer in the cardia, Malignant neoplasm of overlapping sites of stomach, Malignant neoplasm of the pyloric antrum and Septicemia. Majority of admissions were male, white, with Medicare or private insurance and in the lower two income quartiles. Furthermore, majority of patients were treated in large urban teaching hospitals located in the south. The inpatient mortality rate was 7.3% (6.6% - 8.1%). The average length of stay was 7.6 (95% CI -7.4-7.8) days. The mean total hospitalization charges were \$73,867 (95% CI -\$70,750 – \$76,985) with a cumulative healthcare burden of \$3.2 billion.

Discussion: Among patients with gastric cancer, the use of inpatient services is significant with around 50,000 admissions per year. Hospital admission is associated with substantial mortality along with a staggering cumulative in-hospital healthcare burden of \$3.2 billion per year. Interventions aimed at decreasing hospital admission among patients with gastric cancer have the potential to decrease both mortality and healthcare resource utilization.

ACP Michigan Chapter Scientific Meeting 2018

Oral #24

Category: Quality Improvement

Institution: Sinai Grace Hospital – DMC – Detroit
Program Director: Mohamed Siddique, MD, FACP
Presenter: Suganya Chandramohan
Additional Authors:

“All Eyes on You”: A Covert Observational Study on Contact Precaution Compliance at Six Detroit Medical Centers

Background:

Despite the dramatic increase in the incidence of multidrug resistant organisms (MDROs), major gaps in knowledge and attitude toward the contact precautions (CP) persist among healthcare workers (HCW). The aim of this study was to covertly monitor, analyze and compare the overall CP bundle and individual CP (hand hygiene(HH), glove and gown) compliance among HCW during routine patient care.

Methods:

A prospective covert observational study was conducted from July 2017 to February 2018 in six Detroit Medical Centers (DMC). Trained auditors used speedy audit tool to monitor and record the compliance. Education was provided to HCWs before and during the study period. However, a targeted education [on strict HH practice before donning] was conducted in one hospital (pilot hospital).

Results:

A total of 6274 observations were collected. The overall CP bundle compliance was 38% [Nurse-44%, Physician-42%, MS-45%, AHP-30%, SWS-21%, Unknown-13%]. The individual CP compliance were 49.1% HH, 79.9% gloving, 62.3% gowning. HH compliance before donning were strikingly low (40%) compared to after doffing (62%). Within a month of the targeted education at the pilot hospital we noticed a drastic increase in the compliance rates. Individual HH compliance increased from 26% to 75% ($P < 0.0001$) and overall CP bundle compliance increased from 16% to 68% ($P < 0.0001$).

Conclusion:

The low HH compliance before donning can be linked to the common misconception that gloves are a substitute to hand hygiene. Recognition of this knowledge gap and targeted education has aided to improve compliance rate among all DMC HCWs.

ACP Michigan Chapter Scientific Meeting 2018

Oral #25

Category: Clinical Vignette

Institution: Sinai Grace Hospital – DMC – Detroit

Program Director: Mohamed Siddique, MD, FACP

Presenter: Anfall Fahim

Additional Authors: Mohamad Taha, MD (resident); Abdullah Rathur, DO (resident);
Camelia Arsene, MD, PhD, MHS; Geetha Krishnamoorthy, MD.

Left Atrial-Esophageal Fistula with Cerebral Air Embolism – A Devastating Complication of Atrial Fibrillation Ablation!

Introduction:

Left atrial-esophageal fistula occurs in 0.01-0.2% of patients undergoing radiofrequency ablation for atrial fibrillation, days to weeks postoperatively. It is a diagnostic challenge due to its non-specific clinical and is associated with a mortality of 71.4-83%.

Case Description:

A 42-year-old male with non-ischemic cardiomyopathy presented to Emergency Department with chest pain and encephalopathy, four weeks after pulmonary vein isolation for atrial fibrillation. Examination revealed paraparesis and blindness. CT-Head showed evidence of multiple cerebral air emboli. Cardiac troponins were markedly elevated hence patient was initially anticoagulated. He was transferred to the ICU where his neurological status deteriorated. Repeat CT-Head demonstrated intracerebral hemorrhage, therefore anticoagulation was discontinued. CT Angiogram of the thorax demonstrated accumulation of air between the left atrium and esophagus, and bedside transthoracic echocardiography showed a transmural defect in the left atrium. The patient worsened hemodynamically, requiring vasopressors and intubation. Overnight he developed massive gastrointestinal bleed requiring multiple transfusions. The following day, patient had multiple episodes of cardiac arrest and expired. Autopsy revealed a 2 cm x 0.8 cm transmural defect of the esophagus communicating with a defect in the left atrium.

Conclusion:

Left atrial-esophageal fistula is a rare complication that occurs due to thermal injury to the esophagus during pulmonary vein isolation and should be suspected in patients presenting with new neurological deficits post ablation. Emphasis on intraoperative preventative strategies and improved awareness of this condition may reduce the incidence of this highly fatal complication. Prompt diagnosis, followed by immediate surgical repair, is vital to improve survival.

ACP Michigan Chapter Scientific Meeting 2018

Oral #26

Category: Clinical Vignette

Institution: Henry Ford Allegiance Health

Program Director: Vivek Kak, MD, FACP

Presenter: Laith Jacob

Additional Authors: Harpreet Singh, MD

Potentially Lethal Doses of Insulin in Otherwise Normal Persons, Can Be Helpful in the Management of Refractory BB & CCB Toxicity

BACKGROUND

The literature on using insulin in management of patients with beta blocker (BB) and calcium channel blockers (CCB) overdose is limited. Animal studies have shown that Insulin up to 10 units/Kg/min showed marked inotropic properties and were superior in efficacy when compared with glucagon and epinephrine.

CASE REPORT

47 years old gentleman (108 Kg) presented to ED with unresponsiveness secondary to overdosing on 42 tablets of Metoprolol 100 mg each and 21 tablets of Amlodipine 10 mg each, along with other medications. The patient was admitted to ICU with cardiogenic shock (BP 78/37 and PR of 39) and acute hypercapnic respiratory failure. He was intubated, and treated with fluids, pressors (norepinephrine, vasopressin, epinephrine, and dopamine), calcium and glucagon, with no significant improvement in his vitals. Poison control center recommended to start patient on insulin 300 units/ hour and to increase it by 0.5 units / kg/ 30 minutes targeting 8 units/kg/hr, which was done. Dextrose 50% was added targeting blood sugar around 100 mg/dl. On the 3rd day of admission, we approached 600 units of insulin/hr. He was fully conscious, BP 108/56, pulse 95. Subsequently he was weaned off pressors and insulin, was extubated and transferred to medical floor. He was discharged in stable condition.

CONCLUSION

Our case highlights that maintaining adequate cardiac output in these subset of patients requires a multitude of simultaneous therapies that support adequate circulation. Clinicians should consider high dose insulin in refractory cases.

ACP Michigan Chapter Scientific Meeting 2018

Oral #27

Category: Clinical Vignette

Institution: Henry Ford Health System – Detroit

Program Director: Odaliz Abreu Lanfranco, MD, FACP

Presenter: Kajali Mishra

Additional Authors: Sarah Gorgis M.D., Rimma Polevoy M.D.

Meckel's Diverticulum: Many Faces in Different Phases

Meckel's diverticulum is one of the most frequently occurring congenital anomalies of the gastrointestinal tract; in most cases it has an asymptomatic course. It is known to cause complications such as massive gastrointestinal bleeds and small bowel obstruction. However, the complications are known to occur in children, rather than adults. We present a rare case of Meckel's diverticulum in an adult.

A 31-year-old male presented to us with multiple large bright red bloody bowel movement and a witnessed syncopal episode. An emergent endoscopy revealed a gastric polyp, and colonoscopy showed bright red blood throughout the colon and terminal ileum without identification of the source. Computed tomography angiography, tagged red blood cell scan, push and capsule endoscopy were also unable to identify the source. Nuclear scan was performed and revealed evidence of Meckel's diverticulum. He underwent a laparoscopic ileal resection with primary anastomosis for a 3 cm Meckel's diverticulum with 4 cm pedunculated stalk. He made symptomatic improvement, and was able to return home.

This case highlights a rare cause of lower gastrointestinal bleed in an adult. Physicians should be mindful of the possibility of Meckel's in an adult, as the bleeding can be life-threatening. Knowledge of the clinical and radiologic findings of Meckel's diverticulum can aid in the early and accurate diagnosis of this anomaly and its complications. There is no consensus for early operative interventions for asymptomatic Meckel's diverticulum in adults, as surgical complications are far more common in adults versus children.

ACP Michigan Chapter Scientific Meeting 2018

Oral #28

Category: Quality Improvement

Institution: McLaren Regional Medical Center/MSU – Flint

Program Director: Parul Sud, MBBS, FACP

Presenter: Hafiz Khan

Additional Authors: Mahin Khan, Siddique Chaudhary, Ahsan Wahab, Bilal Nasir, Juan Gonzalez, Farah Al-Sabie, Shagufta Ali

Improving Transition of Care by Increasing Post-Hospital Discharge Follow-up Rates at the Internal Medicine Residency Clinic

Background:

Transition of Care (TOC) is defined as movement of the patient from one setting of care to another. TOC can create gaps in care and result in readmissions exerting burden on the healthcare system. Currently, we have no system to confirm follow-up appointments at the time of discharge.

CQI AIM:

Our project aims to improve 2-week post-discharge follow-up rates at the Internal Medicine Residency Clinic.

Methods:

Study period is from January–June 2018. Baseline data were collected on inclusion criteria; Patients who had established PCP or chose resident as new PCP at the time of discharge. Process mapping and root cause analysis were performed. CQI interventions were implemented as new “TOC policy”.

Results:

Pre-intervention results showed that 17.6% patients were seen within the 2-week period, 35.29% after 2-weeks while 41.17% did not make an appointment. Post-intervention data showed that 30% and 67% patients had follow-up within 14-days after first and second PDSA cycles, respectively. Patients’ rate who did not schedule follow-up appointment was reduced to 33%.

Discussion:

TOC can improve patient care and reduce readmissions. Studies showed lesser follow-ups with residents likely due to limited clinic dates as compared to faculty. Literature suggests that TOC including follow-ups, medication reconciliation, etc. were most effective measures. Our future goals are to analyze data at 3 and 6 months. Depending on results, we will either design next PDSA cycle or implement our strategy.

Conclusion:

Our data suggest that by educating the residents and implementing a standardized process, we can improve TOC visits.

ACP Michigan Chapter Scientific Meeting 2018

Oral #29

Category: Research

Institution: Michigan State University – East Lansing

Program Director: Supratik Rayamajhi, MD, FACP

Presenter: Shiva Shrotriya

Additional Authors: Shiva Shrotriya MD MPH, Declan Walsh MSc FACP FRCP, Tara Eaton PhD, Mukta Sharma MD, Supratik Rayamajhi MD

Psychological, Physical and Functional Importance of Patient Reported Outcomes in Cancer Patients

Introduction:

There has been increased interest in patient-reported outcomes (PROs) as they allow consistent monitoring of patients' symptoms and quality of life. We evaluated the prevalence of PROs among cancer outpatients. Our objective was to look at the association of ET components with demographic and disease characteristics.

Methods:

PROs were prospectively collected cross sectional data which were later mixed with retrospectively obtained clinical data from the EMR. Predictors of ET components were determined by linear regression analysis. The predictors of those who required Help was determined by logistic regression.

Results:

The mean age was 58 (± 14) years. 54% were male. The common cancer diagnoses were breast 17%, hematological (Leukemia) 17% and lymphoma 12%. Only a minority (7%) of participants required help (N = 1076) with the tablet-based surveys. Age categories ≤ 30 and 51–70 scored lower in mean depression ET. African Americans had a higher mean ET Anger scale. African Americans scored higher in mean need of Help –ET. Age 31-50 years was at 13% lower risk and 51–70 years was at 72% lower risk. Those with self-care problems were at higher risk of requiring Help with tablet computer.

Conclusions:

Many cancer patients visiting the cancer center had high pain/discomfort, anxiety/depression, problems with usual activities and mobility problems. Younger patients (31-50 years) had more distress and depression (ET). African Americans reported more problems with mobility, self-care, usual activities, pain/discomfort and anxiety/depression (EQ5D). Those with self-care problems were at risk to require help with tablet-based surveys.

Institution: Sinai Grace Hospital – DMC – Detroit

Program Director: Mohamed Siddique, MD, FACP

Presenter: Mohammed Nayeem

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Beauty Turns Blunder; Silicone Injections Masquerading as Sweet's Syndrome

Background: In the past two decades, non-medical practitioners have largely abused "black-market silicone" for cosmetic purposes. In some cases, consequences will not present itself until years later. Here, we report a patient with acute widespread inflammatory response and end-organ dysfunction, nine years after receiving silicone injections.

Case presentation: A 33-year old male-to-female transgender patient with transient renal failure presented with complaints of nausea, vomiting, abdominal pain, high grade fever and chills. She was febrile and tachycardic. Due to elevated creatinine levels from baseline, she received emergent dialysis. Despite being on empiric antibiotics, she continued to spike high fevers. CT-abdomen revealed chronic skin thickening with subcutaneous soft tissue calcifications in the bilateral gluteal region. Our initial impression was "Sweet's syndrome". But on further inquiry, she reluctantly admitted to receiving multiple silicone injections to give her a feminine figure. Approximately, 2L of industrial grade liquid silicone was injected to her upper chest, hips, and gluteal regions in a "warehouse." Multiple tender, warm, and indurated nodules were noted at these sites. Skin biopsy revealed epidermal hyperplasia, stromal sclerosis, and fat necrosis. Solumedrol was started with resolution of her fever and symptoms. She was discharged on prednisone with outpatient surgical follow-up for possible removal of her silicone deposits.

Discussion: As silicone ages, it migrates eliciting an acute inflammation with systemic inflammatory response resulting in disfigurement. Clinical picture is quite similar to Sweets syndrome. Management involves steroids and empiric antibiotics. Patients will ultimately benefit from surgical removal of the silicone.