ACP Michigan Chapter Scientific Meeting 2020

Oral # 1 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Sana Jaffery
Additional Authors: Josephine Dhar MD

Precipitation of Sweet's Syndrome After Granulocyte Colony Stimulating Factor (G-CSF) Administration to a Patient with Felty's Syndrome

Sweet's syndrome (SS) is a rare acute febrile neutrophilic dermatosis, characterized by eruptions of painful erythematous plaques or nodules, occasionally with blisters or pustules. SS is associated with autoimmune diseases and malignancies, and can be precipitated by infections or drugs, such as G-CSF.

73-year-old female with rheumatoid arthritis (RA) and Felty's syndrome with pancytopenia admitted for febrile neutropenia and eruption of diffuse, painful erythematous plaques, and pustules. She received G-CSF for neutropenia prior to admission. Exam: bilateral pleural effusions , splenomegaly, no active synovitis. She was not on any RA drugs for the past year. Laboratory values showed low C3 and C4 , +RF, +CCP, +MPO Ab>8, p-ANCA >1:1280, +ANA 1:1280 homogeneous pattern, +Lupus anticoagulant., and MGUS (IgM Kappa). Pre G-CSF : WBC = 650 K/mcl, Post G-CSF:. WBC= 4400 K/mcl.. Skin biopsy: intense neutrophilic inflammation in the dermis and subdermal tissue.. Bone marrow (BM) biopsy: neutrophilic inflammation of the BM, no evidence of malignancy, consistent with G-CSF stimulation. G-CSF was stopped and high dose corticosteroids and dapsone were initiate with marked improvement of the skin.. She contracted COVID19 infection soon after with gastrointestinal symptoms only, and had a mild course.

SS is a rare disorder and can occur after G-CSF, as demonstrated in this case. Interestingly, her rheumatoid arthritis was quiescent and COVID19 infection was not serious in nature. This highlights the importance of skin biopsy in diagnosing SS, and the potential protective effects of impaired immunity from COVID19 by the inability to mount an extensive inflammatory response.

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Oral # 2 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Abdulla Nasser
Additional Authors: Abdulla Nasser MD, Shyam Sunde Moudgil MD, Internal Medicine, Ascension St. John Hospital Detroit, MI

COVID-19 Induced Focal Encephalitis

Introduction:
COVID-19 is a viral infection primarily affecting the respiratory tract but also involve other organs like causing elevated liver enzymes, acute kidney injury, and coagulopathy that causes an increase in risk for thromboembolic events. COVID-19 has also been associated with neurological pathology, like strokes, and encephalopathy. Encephalitis due to COVID-19 has been rarely reported.

Case report:
A 20 years old healthy male presented to the hospital with two-week duration of intractable headaches associated with emesis. Patient reported that two months ago he had been hospitalized for a new onset seizure, he was treated with seizure medication. At that time, an MRI of the brain showed hyperintensity in the left frontal gyrus, and he had been asymptomatic until he started having headaches. On further questioning, patient reports that three weeks prior to his seizure in mid-February he experienced some self-limiting cold like symptoms for one day. A repeat MRI to investigate the headaches showed an increase in hyperintensity in the left frontal cortex with contrast Enhancement. A Spinal Tap was performed at this time which revealed CSF pleocytosis and elevated protein. COVID-19 testing was PCR negative but IgG antibody positive. At that time patient was treated with IVIG which resulted in headache resolution. A follow-up brain MRI Seven days after IVIG showed near total resolution of the findings.

Discussion:
Here we present a rare case of focal encephalitis due to COVID-19 infection presenting with seizure, and headache associated with MRI changes. Both symptoms and imaging findings improved after IVIG treatment.

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Oral # 3 Category: Research

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Omama Siddiqui
Additional Authors: Kyle Griffith; Derrick Humphrey, MD; Elizabeth Bankstahl, MD, FACP; Susana M. Szpunar PhD

Compliance with American Diabetes Association's Recommendation on Urinary Albumin Screening in Resident and Faculty Clinics

Introduction: Diabetes mellitus (DM) is the leading cause of end-stage renal disease (ESRD). Approximately 40% of diabetics develop diabetic nephropathy. The earliest marker of renal dysfunction in DM is microalbuminuria (MAU), with worsening MAU correlating with progressive renal disease. Intervening with medications that reduce MAU limits the progression of diabetic nephropathy. American Diabetes Association (ADA) recommends yearly assessment of MAU in type I DM of ≥5 years and in all patients with type II DM.

Objective: 1) How adherent are physicians in following the ADA's recommendation for assessing MAU in patients with DM in the resident and faculty Internal Medicine Clinic? 2) How does the adherence compare nationally?

Methods: We did a retrospective chart review of 600 randomly selected patients 18-75 years old with Type I DM of ≥5 years or type II DM of any duration. Patients with at least 2 visits to the clinic in the year 2019 were included. Patients with ESRD requiring dialysis were excluded. Patient demographics and pertinent clinical data were collected and analyzed using Student's t-test and Chi-squared test.

Results: MAU screening average was higher in the faculty clinic compared to the resident clinic (66% vs 56%, p=0.02). Combined average of both clinics for MAU screening was 60% which is lower than the 2018 national average of 88-96% as reported by the National Committee for Quality Assurance.

Conclusion: Screening for MAU is a simple noninvasive test. Increasing awareness of MAU screening guidelines can help recognize the risk and progression of diabetic nephropathy and facilitate the initiation of appropriate medications.

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Oral # 4 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Claudia Villatoro-Santos
Additional Authors: Villatoro C, MD PhD; Yacoub M, MD Ascension St. John Hospital, Detroit Michigan

Chronic Urticaria and CVID: An Association to Remember

Common variable immunodeficiency (CVID) is characterized by decreased immunoglobulin levels, reduced response to specific antigens, and higher incidence of recurrent infections. It is the most common symptomatic human primary immunodeficiency, and it has a considerable clinical variability characterized by autoimmunity, lung, liver and gastrointestinal inflammatory disease, granulomatous disease, and lymphoproliferative disorders. There is usually a delay in diagnosis due clinical heterogeneity. Chronic urticaria and CVID are usually present in HIV + patients, but there are 8 previously reported cases of CVID associated with chronic urticaria in HIV- patients with recurrent infections.

The patient is a 64-year-old Caucasian female with idiopathic chronic urticaria who presented to her PCP's office with mucoid otitis media. Past medical history is significant for hypertension, hyperlipidemia, allergic rhinitis, prediabetes, Barret's esophagus secondary to GERD, paroxysmal atrial fibrillation, CKD, remote history of recurrent pyelonephritis with sepsis and osteomyelitis in the face, prior hepatitis with negative viral serologies, and scarlet fever as a child. Her chronic urticaria was initially treated with antihistamines and a short steroid course, but later on, she needed dapsone for refractory urticaria with modest improvement. When she presented with mucoid otitis media immunoglobulin levels were found to be decreased. The pneumococcal vaccine antibody challenge confirmed the diagnosis of CVID. Her HIV test was negative. She was started on IVIG and her chronic urticaria stabilized.

In patients with chronic urticaria refractory to treatment, especially with history of recurrent infection, a diagnosis of CVID should be considered, regardless of HIV status.

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Oral # 5 Category: Research

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Jose Zamora-Sifuentes
Additional Authors: Abdulla Nasser, MD; Mohamad Ayas, MD; Saif Affas, MD; Rajaninder Sharma, MD, Susanna Szpunar, PhD

Hepatitis A Immunization Rates in Patients with Underlying Chronic Hepatitis C Infection in Community Hospital-Based Clinics

Hepatitis C remains one of the most common chronic liver diseases in the United States. Despite recommendations from multiple societies in favor of hepatitis A virus (HAV) immunization in patients with chronic hepatitis C, the rate of immunization in these patients remains low.

This study was a retrospective chart review of adult patients (ages 18 years and older) with known hepatitis C infection as diagnosed by presence of hepatitis C antibody and viral load who had established care in Detroit community clinics. Data were collected from electronic medical records (EMR) and the Michigan Care Improvement Registry (MCIR) to assess vaccination rates and to identify any factors that differentiate patients who were and were not vaccinated. 245 patients met inclusion criteria. The mean age was 59.9 ± 11.1 years, 42.5% were male, 45.9% Caucasian, and 49% African American. The percentage of patients with chronic hepatitis C who were immunized for hepatitis A was only 46.9% and 47.9% as per our EMR and MCIR, respectively. Gender, race, comorbidities, physical exam findings, and imaging were not associated with immunization status. Patients treated for hepatitis C infection were more likely to be immunized ($p=0.002$). Approximately 20% of the patients involved in this study had a discrepancy between their EMR and MCIR profile.

This study highlights the need for improvement in the immunization rates for hepatitis A in patients with chronic hepatitis C as well as the presence of discrepancies between EMRs and MCIR.

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Oral # 6 Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Emily Langnas
Additional Authors: Alex Schumaker MD, Lynda Misra DO, Paul Bozyk MD

Extra-Alveolar Air in a Patient with COVID-19

Patchy bilateral airspace opacities are a well-documented radiographic feature of individuals hospitalized with coronavirus disease 2019 (COVID-19). Few cases have been reported of extra-alveolar air in the setting of non-invasive mechanical ventilation in these patients. We present a case of pneumomediastinum, pneumothorax, and subcutaneous emphysema in a patient with COVID-19. A 42-year-old male with a history of obesity was admitted to the hospital with a seven-day history of cough, fevers, and shortness of breath with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) PCR testing positive. Given escalating oxygen needs, he was placed on heated high-flow nasal cannula (HFNC) with FiO2 of 100% at 55 liters per minute on day four of admission. He subsequently developed bilateral upper extremity crepitus. Radiographic imaging of his bilateral upper extremities demonstrated severe diffuse subcutaneous emphysema. Chest radiograph initially demonstrated pneumomediastinum, which progressed to development of right-sided pneumothorax necessitating tube thoracostomy. The patient decompensated shortly after, requiring intubation and transfer to the intensive care unit. He was successfully extubated after 13 days and survived hospitalization to discharge. Pneumomediastinum, pneumothorax, and subcutaneous emphysema are a rare occurrence with HFNC, though this case highlights potential risk to COVID-19 patients, possibly related to excessive cough in combination with alveolar damage from viral pneumonitis with acute respiratory distress syndrome.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 7 Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Russell Leong
Additional Authors: Melanie Smalley, DO. Paul Chittick, MD. Jason Batke, MD. Zachary Scherzer, MS3

Leptospirosis in Michigan Presenting with Rapid-Onset Hyperbilirubinemia

Leptospirosis is a zoonosis with clinical presentations that range from non-specific illness to acute renal failure, and death. In the United States, there are 100-150 cases reported annually, with most cases reported in the Southern and Pacific coastal states, however, here we present a case found in Michigan. A 69 year old Caucasian male presented to William Beaumont Hospital for low-grade fevers, nausea with emesis, and diarrhea. On admission, skin pallor was noted and patient was complaining of myalgias. He was found to be in acute renal failure, and total bilirubin was mildly elevated at 2.3. His condition continued to deteriorate and he developed marked jaundice, hyperbilirubinemia up to 42.3, CK of 9772, thrombocytopenia of 21k, leukocytosis of 20.3k, and transaminitis. Initially, leptospirosis IgM antibody was equivocal, however repeat antibody was positive. MAT agglutination test was sent to CDC and confirmed L. interrogans. He completed a 7 -day course of doxycycline with resolution of symptoms, and he was discharged from the hospital. Further history taking revealed that his occupation as a cleaner often involved clearing areas of rodents, which is well known to carry different pathogenic serovars of leptospirosis spp. The profound acute hyperbilirubinemia seen in this patient may be a unique characteristic of leptospirosis and has been suggested to be due to the loss of E-cadherin membrane expression leading to cell membrane injury and subsequent liver dysfunction. Thus, this case illustrates the importance of detailed history taking when approaching a patient with non-specific symptoms and exposure risks.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 8 Category: CQI/EBM

Program: Beaumont Hospital – Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Daniel OConnor
Additional Authors: Melanie Smalley, D.O.; Pradeep Kaminoulu, M.D.; Alexandra Halalau, M.D.

Increasing Discharge Pharmacy ("Meds-to-Beds") Utilization Via Staff Education Initiatives: A Quality Improvement Study

Introduction: Readmission after hospitalization continues to be a significant barrier to delivering safe and effective care given the links to additional cost and exposure to hospital acquired infections and immobility. Being discharged from the hospital on new medications can be very challenging for patients. "Meds-to-Beds" is a program in place at Beaumont Hospital where patients have their discharge medications delivered to their bedside prior to discharge. This type of program has been shown to be effective in decreasing readmission rates. "Meds-to-Beds" current utilization rate is 26%; our overall goal is a utilization rate of 40%.

Methods & Design: A multidisciplinary team was formed, including residents, attending physicians, pharmacists and registered nurses. A Plan-Do-Study-Act (PDSA) model was chosen for the design and root causes analysis was performed identifying staff education as a key lever. PDSA cycle 1 (January 2020) is to increase staff education through a staff meeting with nursing leadership. PDSA cycle 2 (February 2020) consisted of reminder cards placed at nurse and physician workstations. Data will be collected for March 2020, which will be compared to prior. This study focuses on one unit of the hospital which has a rate of 11%. For PDSA cycle 3, we would like to implement a change in the electronic medical record system to make the process more efficient.

Discussion: We believe this study will benefit patients by creating a safer transition from the hospital to home by increasing the utilization of the Meds-to-Beds program, thereby increasing patient compliance and decreasing readmission rates.

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Oral # 9 Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Ashbina Pokharel
Additional Authors: Dilip Khanal, Pradeep Khanal,

"Thrombotic Storm" Catastrophic Thrombotic Thrombocytopenic Purpura (TTP) Associated with Systemic Lupus Erythematosus Nephritis

Thrombotic thrombocytopenic purpura (TTP) can present as catastrophic thrombotic syndrome characterized by rapid onset of multiple thromboembolic occlusions affecting diverse vascular beds.

32-year-old female with history of SLE presented with epigastric abdominal pain, fever, arthralgia, petechial rash and uncontrolled hypertension. Lab work up revealed acute kidney injury with proteinuria and hematuria. CBC showed hemolytic anemia and severe thrombocytopenia. D dimer was elevated, fibrinogen was normal, PT/INR and aPTT were normal, schistocytes were positive. There was elevation in AST, ALT and indirect bilirubin. Infectious work up including blood culture, urine culture, acute hepatitis panel, EBV, CMV were negative. ANA was strongly positive. Anti DsDNA, ANCA, anticardiolipin IgM were positive, C3 and C4 were low. Patient was initially admitted for management of lupus nephritis. Patient then developed elevated troponin, EKG showed sinus tachycardia, Echocardiogram showed EF 50% without focal wall motion abnormalities consistent with myocarditis. Patient was treated with high dose IV dose steroids, IV hydration and aggressive blood pressure control. Unfortunately, patient rapidly declined and within 15 hours of admission developed cardiac arrest and expired. Autopsy revealed extensive thrombotic microangiopathy in various organs. There was also diffuse proliferative membranous glomerulopathy consistent with lupus nephritis. ADAMTS 13 activity later resulted to be decreased.

TTP associated with acute SLE flare can pose significant diagnostic and therapeutic challenge and can have devastating consequences. High index of suspicion and early intervention is key for good outcome.

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Oral # 10 Category: Research

Program: Hurley Medical Center/MSU – Flint
Program Director: Vijay Naraparaju, MD, FACP
Presenter: Srikanth Malladi
Additional Authors: Kewan Hamid, Nitin pendyala, Vjaysai Veerapaneni, Smit deliwala, Samir A ilian, Adiraj Singh

Management of Stable Coronary Artery Disease and Atrial Fibrillation with Antithrombotic Therapy, A Systematic Review and Meta-analysis

Background: Long term management of patients with stable coronary artery disease of >1 year after Myocardial Infarction or percutaneous coronary intervention and atrial fibrillation is unclear. Current guidelines recommend using oral anticoagulation (OAC) alone (weak recommendation with low quality evidence). Two new RCTs have been published about this topic. Objective: To conduct a systematic review and meta-analysis of all the published data to compare oral anticoagulant (OAC) alone versus OAC plus single antiplatelet therapy (SAPT).

Methods: Electronic search with appropriate terms in 3 different databases was done. No language limitation was applied. RCTs and observational studies without age limitation with a follow up of at least 1 year were included. A comparison of safety and efficacy between OAC and OAC+ SAPT were analyzed.

Main Results: 8 studies involving 10,120 patients were analyzed (5237 patients on combination therapy, 4883 on OAC alone). There was no statistically significant difference in major adverse cardiac events (MACE) (HR 1.067; 95% CI 0.912- 1.249; P-value 0.417) and all cause mortality (HR 1.048; 95% CI 0.830- 1.323; P-value 0.695), Cardiovascular mortality. Mono therapy group has a higher incidence of Myocardial infarction (HR 1.229; 95% CI 1.011-1.495 p-value 0.039). Higher incidence of major bleeding was found in the combination therapy group (HR 0.649 95% CI 0.464-0.907; p-value 0.011).

Conclusion: We found no reduction of MACE between combination therapy and mono therapy. Combination therapy showed increased risk of major bleeding in the subgroup analysis. Myocardial infarction (MI) was not higher in the subgroup analysis of the RCTs.

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Oral # 11 Category: Research

Program: Central Michigan University – Saginaw
Program Director: Nicholas Haddad MD, FACP
Presenter: Shakeel Jamal
Additional Authors: Ehizogie Edigin, Asim Kichloo, Bashar Al Jayyousi, Nicholas Haddad

Amyloidosis Adversely Affecting Atrial Fibrillation/Flutter Admissions

Purpose:
To compare the outcomes of patients admitted primarily for atrial fibrillation/atrial flutter (AF) with and without a secondary diagnosis of amyloidosis. The primary outcomes were inpatient mortality, hospital length of stay (LOS), mean total hospital charges, odds of undergoing cardiac ablation, and pharmacologic cardioversion. Heart block, cardiogenic shock and cardiac arrest were secondary outcomes of interest.

Methods:
Data were abstracted from the National Inpatient Sample (NIS) 2016 and 2017 Database. The NIS was searched for adult hospitalizations with AF as principal diagnosis with and without amyloidosis as secondary diagnosis using ICD-10 codes. Multivariate logistic and linear regression analysis was used accordingly to adjust for confounders.

Results:
There were over 71 million discharges included in the combined 2016 and 2017 NIS database. 932,054 hospitalizations were for adult patients with a principal discharge diagnosis of AF. 830 (0.09%) of these hospitalizations had amyloidosis. AF hospitalizations with co-existing amyloidosis had higher inpatient mortality (4.22% vs 0.88%, AOR: 3.92, 95% CI 1.81-8.51, p=0.001), and likelihood of having a secondary discharge diagnosis of cardiac arrest (2.40% vs 0.51%, AOR: 4.80, 95% CI 1.89-12.20, p=0.001) compared to those without amyloidosis.

Conclusions:
AF hospitalizations with co-existing amyloidosis have higher inpatient mortality and odds of having a secondary discharge diagnosis of cardiac arrest compared to those without amyloidosis. However, LOS, total hospital charges, likelihood of undergoing cardiac ablation, pharmacologic cardioversion, having a secondary discharge diagnosis of heart block and cardiogenic shock were similar in the two groups.

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Oral # 12 Category: Clinical Vignette

Program: Central Michigan University – Saginaw
Program Director: Nicholas Haddad, MD, FACP
Presenter: Mohamed Mohamed
Additional Authors: Insija Selene MD, Shrinivas Kambali MD

Thyroid Putting Me to Sleep; A Rare Case of Hashimoto's Encephalitis

Introduction:
Hashimoto's Encephalitis (HE) is a rare disease associated with Hashimoto's Thyroiditis. Although exact mechanism is unknown, it is believed to be related to be immune related autoantibodies to alpha enolase. It is characterized by subacute onset of altered mental status in the presence of elevated Antithyroid peroxidase antibody (TPO) and responds well to steroids.

Case:
We present a case of a 39-year-old female with past medical history of Multiple Sclerosis and recently diagnosed Hashimoto's Thyroiditis, for which she was on 150 mcg of Levothyroxine. On admission she was severely encephalopathic with a GSC score of 7 and had required intubation. CT head was negative, MRI showed non-specific changes as per neurologist. Labs were significant for severely low TSH level of 0.02, normal free T4 level. EEG did not reveal seizure activity, Lumbar puncture showed lymphocytic pleocytosis with elevated protein level, and no macrophages noted. Serum Anti- TPO Ab was severely elevated at 877 IU/Ml. Patient's Levothyroxine was held restarted at lower dose and subsequently started on high dose Corticosteroids. Marked neurological improved was noted within 2 days and was subsequently extubated.

Discussion:
Unlike other disorders regarding the thyroid like hypo/Hyperthyroidism, HE is believed to be related to the immune mediated, as most patients are euthyroid as was the case in our patient. It is a rare disease that may be severely underdiagnosed. Suspicion should be elevated in any patient with altered mental status with prior history of thyroid disease, or abnormal thyroid labs on admission.

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Oral # 13 Category: Clinical Vignette

Program: Central Michigan University – Saginaw
Program Director: Nicholas Haddad, MD, FACP
Presenter: Selene Selene
Additional Authors: Dr. Mohamed A Mohamed , Dr Shakeel Jamal, Dr Asma Taj, Dr Asim Kcihloo

Half Smile- A Side Effect of Immunotherapy

Immune checkpoint inhibitors (ICIs) are currently among the most innovative cancer treatment strategies with significant prognostic improvement in advanced cancers. Atezolizumab is a recently approved PD-1 ligand (PDL-1) inhibitor for the treatment of small-cell lung carcinoma. Immune-related adverse events (IR- AE) caused by ICIs due to disrupted immune homeostasis and impaired self-tolerance is often life-threatening.

A 68 yr old female with history of small cell lung cancer on immunotherapy with atezolizumab presented to the emergency department with acute onset right-sided facial weakness and numbness. Physical examination revealed left facial droop with decreased sensation and strength on the right temporalis and masseter muscles. A comprehensive stroke workup including CT and MRI brain and CTA head and neck did not show any acute pathology. She was initially treated with aspirin and statin, which were later discontinued, and initiated on glucocorticoid therapy after a multidisciplinary consensus. The patient had complete resolution of her symptoms and was reinitiated on the immunotherapeutic agent.

Facial palsy (FP) in patients with underlying malignancy could result from multiple etiologies varying from brain metastases to cancer treatment. Although infrequently, FP can present as neurological IR- AE, which resolves completely after the withdrawal of inciting agents and glucocorticoid therapy. The onset of FP in our patient after initiating treatment with atezolizumab and had a favorable outcome after the above treatment measures strengthens this clinical correlation

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Oral # 14 Category: Research

Program: DMC Sinai Grace
Program Director: Mohamed Siddique, MD, FACP
Presenter: Rahaf Ibrahim
Additional Authors: Alizeh Rizvi, MD Sana Iqbal, MD; Ahmed Jamal Chaudhary, MD, FACP ; Rana Ismail, PhD, MSc.

Risk of Venous Thromboembolism (VTE) and the Use of Progesterone Contraception

Introduction: Women with certain medical conditions are at increased risk of developing thrombosis and generally should not take estrogen-containing contraceptives; however, little is known about the thrombogenic potential of progestin-only contraceptives.

Methods: A PubMed/Cochrane literature search was performed using keywords: “Progesterone AND VTE,” “progesterone injection AND venous thromboembolism,” “progesterone injection AND VTE” and “Progestin vs. no therapy VTE.” Nine studies were found relevant, of which one meta-analysis, five case-control, and three retrospective cohort studies.

Results: In the meta-analysis, a total of 147 women across eight studies were diagnosed with VTE while taking progestin-only contraception. Based on the random-effects model, the summary measure for the adjusted relative risk of a VTE episode for users versus nonusers of a progestin-only contraceptive was nonsignificant at 1.03 (95% CI, 0.76 -1.39, P>0.05). Subgroup analysis confirmed lack of statistically significant association between VTE risk and progestin-only pills or with progestin intrauterine device. However, the risk of a VTE event was statistically significant for users of an injectable progestin versus nonusers with RR=2.67 (95%CI, 1.29 -5.53). Similarly, one observational study on 446 patients who used injectable depot-medroxyprogesterone acetate contraceptives compared to 1146 controls or nonusers of hormonal contraceptives reported that the injectable progestin was associated with a 3.6-fold increase in the risk of VTE (95% CI, 1.8-7.1).

Conclusion: The use of oral progestin-only contraception was not associated with an increased risk of VTE compared with nonusers of hormonal contraception. In contrast, users of injectable progestin versus nonusers were found to be at increased risk of VTE.

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Oral # 15 Category: CQI/EBM

Program: DMC Sinai Grace
Program Director: Mohamed Siddique, MD, FACP
Presenter: Celestina Iheanacho
Additional Authors: Bell, Eleisha; Amir, Adam; Tong, Anne; Williams, Niketa

Reducing Concomittant Use of Inhaled Corticosteroids and Systemic Corticosteroids Among Patients with Acute COPD/Asthma Exacerba

Introduction: 65/200
Chronic Obstructive pulmonary disease (COPD) is the 3rd leading cause of death in the United States. Guidelines for treatment of acute COPD exacerbations include five days of systemic corticosteroids (SCS) therapy without concomitant use of inhaled corticosteroids (ICS). Simultaneous administration of ICS and SCS for COPD management is unnecessary, costly, liked to prolonged hospital length of stay and adverse drug reactions among patients.
Objective: 32/200
The purpose of this quality improvement project is to reduce the concomitant use of ICS and SCS for the treatment of COPD/asthma exacerbations in patients admitted to DMC Sinai Grace Hospital.
Methods: 40/200
A chart review was conducted on 457 patients admitted to DMC Sinai Grace Hospital between October 1 and December 31, 2019, for COPD and asthma exacerbations. For each admission, demographic data, diagnosis, treatment and prescribers were recorded
Results: 68/200
The results indicate that approximately 48% of admitted patients received ICS while still on SCS therapy. Among those who received dual corticosteroid therapy (ICS + SCS), ICS was prescribed by a Nurse Practitioner (NP) or Physician Assistant (PA) in 52% of admissions. The second largest groups of prescribers were private internal medicine physicians at 30% of admissions, followed by Internal Medicine or Family Medicine Residents (IM/FM) at 18%.
Conclusion: 32/200
The information gained from this quality improvement project helped to identify dual corticosteroid prescribers, while also allowing us to design and implement targeted education for the proper treatment of COPD/Asthma Exacerbations.

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Oral # 16 Category: Clinical Vignette

Program: Henry Ford Allegiance Health
Program Director: Vivek Kak, MD, FACP
Presenter: Alexander Slota
Additional Authors: Nino Balanchivadze MD, Bernd Barthel MD

Eyes Wide Shut: Subperiosteal Orbital Hematoma in Sickle Cell Disease

Subperiosteal orbital hematoma is a known but rarely emphasized complication of sickle cell crisis. Several case reports describe this phenomenon, however, it is uncommonly seen in teaching or practice. We present a case of subperiosteal orbital hematoma in a patient with HbSS sickle cell disease to increase physician awareness about this entity to avoid catastrophic outcome.

A 24-year-old male with a history of HbSS sickle cell disease and beta 0 thalassemia presented to the hospital with an episode of acute pain crisis. He was initially treated with analgesia and antibiotics in the setting of elevated procalcitonin and SIRS without clear source of infection. After initiation of treatment, the patient developed acute swelling of the right eye with exophthalmos, initially attributed to an allergic reaction. Imaging studies revealed a likely orbital hematoma with mass effect into the surrounding structures and severe stretching of the right optic nerve. He was transferred to our hospital for definitive management with oculoplastic surgery. Orbitotomy was performed to evacuate the hematoma and relieve the mass effect, which resolved the ophthalmic issues. He was discharged within 6 days of intervention after resolution of his pain crisis.

The incidence of subperiosteal orbital hematoma is indeed low, however, it is a known complication of sickle crisis and is attributed to a unique feature of orbital wall infarction in patients with sickle cell disease. The presence of mass effect and optic nerve involvement make this an ophthalmologic emergency, as such greater awareness should be pursued to avoid severe, permanent complications.

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Oral # 17 Category: Clinical Vignette

Program: Henry Ford Health System – Detroit
Program Director: Odaliz Abreu Lanfranco, MD, FACP
Presenter: Adam Kudirka
Additional Authors: Sally Askar, Erica Herc

Capnocytophaga: A Case of a Rare Zoonotic Infection in an Immunocompromised Host

An 80-year-old male with past medical history of end stage renal disease on hemodialysis via an arteriovenous fistula presented to the emergency department with fevers, chills, shortness of breath, a cough of several months duration and diarrhea of 3 days duration.

Physical exam was unremarkable with the exception of an arteriovenous fistula in the patient's left upper extremity that was without purulence or overlying erythema. Eventually the patient's blood cultures speciated and were positive for Capnocytophaga. Upon further history taking, the patient admitted having recently adopted a new pet dog, who would lick the patient's fistula on occasion.

Although the majority of people are not at high risk of contracting an infection from their pet dogs, older adults, young children, pregnant women, individuals with HIV, asplenia, ESRD or other forms of immunocompromise are at increased risk of contracting diseases from their pets. Due to the high number of households with pets, it is especially important to take a detailed social history in patients presenting with fevers to determine if a zoonotic infection should be included in the differential diagnosis.

Capnocytophaga is a genus of gram negative bacilli found in the oral cavity of both humans and canines. The severity of Capnocytophaga infections is quite broad with some cases simply causing cellulitis and the most severe cases leading to septic shock. While patients with asplenia are at the highest risk, Capnocytophaga should be on the differential diagnosis in immunocompetent patients presenting with severe sepsis with known contact with a dog.

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Oral # 18 Category: Clinical Vignette

Program: Henry Ford Health System – Detroit
Program Director: Odaliz Abreu Lanfranco, MD, FACP
Presenter: Omar Sallam
Additional Authors: Layan El-khatib, MD; Mustafa Mohammed, DO; Bobak Rabbani, MD

Thrombotic Thrombocytopenic Purpura Presenting as a Non-ST Elevation Myocardial Infarction

Introduction:
Thrombotic thrombocytopenic purpura (TTP) is a thrombotic microangiopathy caused by severely reduced activity of the von Willebrand factor-cleaving protease ADAMTS13.

Case presentation:
An 80-year-old female presented with typical chest pain, dizziness, generalized fatigue and headache. Laboratory evaluation revealed an elevated high sensitivity troponin with an initial value of 434 ng/L and peaking at 817 ng/L, elevated creatinine of 1.61 mg/dL, normocytic anemia of 11.2 g/dL and a platelet count of 53 K/uL. An electrocardiogram was obtained showing T-wave inversion in V4, V5 and V6 with poor R-wave progression from V1 to V3. She was admitted for further management of a presumed non-ST segment elevation myocardial infarction (NSTEMI) and was given aspirin and heparin. Two days after admission, her platelet count and hemoglobin dropped to 19 K/uL and 10.2 g/dL, respectively. Further laboratory workup reveled evidence of hemolysis. A peripheral smear was obtained showing schistocytosis. An ADAMTS13 level was obtained showing decreased values of <5. The patient was started on prednisone and plasmapheresis with improvement of her clinical symptoms and her platelet count.

Discussion:
Our patient had clinical symptoms and laboratory findings that should raise the suspicion of TTP-related acute coronary syndrome. The exact mechanism is not well understood, especially that this has been rarely described but is thought to be secondary to thrombosis of the small vessels supplying the myocardium. Given its rarity, there is no consensus regarding the exact management strategy but emergent plasmapheresis should be started to improve blood counts and improve clinical symptoms.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 19 Category: Clinical Vignette

Program: McLaren Oakland
Program Director: Ammar Hatahet, MD, FACP
Presenter: Jason Kaplan
Additional Authors: John Berquist DO, Muqaddam Salim MD, Franklin Rosenblat DO

An Epstein-Barr Virus Positive Mucocutaneous Ulcer Resulting in a Perforated Sigmoid Colon

A 67 year old male with a past medical history significant for myasthenia gravis treated with mycophenolate presented to his primary care physician for complaints of recent unintentional weight loss. The ensuing workup revealed a sigmoid mass with biopsies that showed only inflammatory changes. The patient was then scheduled for an elective sigmoid colon resection. The robotic assisted resection revealed a perforated sigmoid colon with a diverticular mass. Subsequent pathology of the resected colon was negative for malignancy but did unveil the mass to be a Epstein- Barr Virus (EBV) positive mucocutaneous ulcer. Immunohistochemistry of the resected colon showed neoplastic cells positive for CD30, CD15, BCL-6, MUM-1 and EBER.

In 2016, the World Health Organization defined a new entity of lymphoproliferative disorders, an EBV positive mucocutaneous ulcer. EBV positive mucocutaneous ulcers can be found in the entire GI tract, skin and most commonly the oropharynx. These ulcers are frequently shallow, circumscribed and solitary lesions that do not incorporate the bone marrow, lymph nodes, liver or spleen. EBV positive mucocutaneous ulcers are typically seen in patients who are either elderly or immunodeficient.

Typically, cases of EBV positive mucocutaneous ulcers have an indolent course, and nearly two thirds of ulcers from this origin respond to withdrawal or reduction of the afflicting agent in a median time of four weeks. However, this case features an EBV positive mucocutaneous ulcer producing a critical outcome, a perforated colon, secondary to iatrogenic immunosuppression for treatment of their myasthenia gravis.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 20 Category: Research

Program: McLaren Regional Medical Center/MSU – Flint
Program Director: Parul Sud, MBBS, FACP
Presenter: Folake Akanbi
Additional Authors: Dr. Kavitha Kesari

Predictors of Undiagnosed Diabetes Mellitus in the US Population Using NHANES Data

Background: Diabetes mellitus (DM) is a chronic multi-systemic disease with significant morbidity, mortality and cost, complications, attributable to late diagnosis of Type 2 DM, represent a major proportion of this cost. The prevalence of undiagnosed DM is on the increase with one in four adults with diabetes in the US unaware of the diagnosis.

Methods: Data from 19,345 respondents in the National Health and Nutrition Examination Survey (NHANES) from 2013-2014 and 2015-2016 was analyzed. Subjects younger than 18 years were excluded; those who answered no to previous diagnosis of diabetes, prediabetes, use of oral glucose lowering agents or insulin were analyzed. The prevalence of undiagnosed diabetes mellitus was calculated using the sampling and weighting procedures of each NHANES period so that the estimate generated reflected US prevalence.

Results: There were 3,343 respondents without a previous diagnosis of diabetes mellitus or prediabetes. The median [IQR] age was 44 years [30-60] years and 1,685 (50.4%) subjects were women. The estimated prevalence of undiagnosed DM was 1.6% (95% CI 1.0 – 2.4). The prevalence of undiagnosed DM in the respondents who were ≥70 years old, obese or had elevated serum triglyceride (>150mg/dl) was double that of the overall population. Factors independently associated with undiagnosed DM included increasing age, obesity, elevated serum triglycerides, Hispanic race and respondents who were neither Hispanic nor non-Hispanic black.

Conclusion: Older adults, obese, and racial minority groups had higher risk for undiagnosed DM. Diabetes screening should be done in these at risk population to prevent complications of DM.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 21 Category: Research

Program: Michigan State University - East Lansing
Program Director: Supratik Rayamajhi, MD, FACP
Presenter: Lawrenshey Charles
Additional Authors: Abdullah Al-abcha, Thamer Almalki, Ahmed Elshafie, Michael Pfeiffer

Intracardiac Verses Transesophageal Echocardiography for Left Atrial Appendage Occlusion: An Updated Meta-Analysis

Background: Transesophageal echocardiography (TEE), which requires general anesthesia, is the standard imaging modality for guidance of left atrial appendage (LAA) occlusion. Intracardiac echocardiography (ICE) is an emerging alternative that can be used for guidance of LAA occlusion, and is done with local anesthesia only.

Methods: We conducted a meta-analysis of all studies that compared ICE-guided vs TEE-guided LAA occlusion. We included studies from inception until April 2020. The primary outcome was procedural success rate. Secondary outcomes included fluoroscopy time, total procedure time, and rate of adverse events. Statistical analysis was conducted using RevMan 5.3. I2 statistics were used to assess statistical heterogeneity. Sensitivity analysis was done with the exclusion of one to two trials to evaluate heterogeneity.

Results: Nine studies with a total of 2,597 patients were included. All studies were observational. Four studies exclusively used a Watchman device. There was no significant difference in procedural success rate between ICE-guided vs TEE-guided LAA occlusion. Heterogeneity was high across studies (I2=65%). Heterogeneity was lowest upon excluding Nielsen 2019 without changing the results (OR 1.42, 95% CI 0.78-2.56, p=0.25, I2=0%). There was no significant difference in fluoroscopy time, total procedure time, and adverse events between the two groups (Figure-1).

Conclusion: ICE showed similar outcomes compared to TEE for guidance of LAA occlusion. According to our results, ICE can be considered a reasonable alternative imaging modality for guidance of LAA occlusion. More data from randomized clinical trials are needed to confirm these results.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 22 Category: Clinical Vignette

Program: Michigan State University - East Lansing
Program Director: Supratik Rayamajhi, MD, FACP
Presenter: Osama Mosalem
Additional Authors: Aaron Nichols, Ahmed ELshafie, Shouq Kherallah, Merryl Treasa Varghese, Pyrial Agarwal, Supratik Rayamajhi MD

Bilateral Breast Masses as a Presentation for T-cell Acute Lymphoblastic Leukemia

Introduction: Breast infiltration is a rare presentation of acute lymphoblastic leukemia (ALL). Hematological infiltration of the breast constitutes 0.25% of breast tumors. Cases of T-cell ALL presenting as breast masses have been sporadically reported in the medical literature, mainly in the relapsed settings, with very few case reports describing it as the initial clinical presentation. The mechanism of breast infiltration in T-cell ALL is still unclear and may be associated with a higher risk of relapse.

Case presentation: 27-year-old Caucasian female, five months postpartum, presented with bilateral breast masses and fatigue of one-month duration. She tried oral antibiotic for possible lactational mastitis and massaging her breast for possible clogged ducts with no improvement. She then developed new-onset extreme fatigue, night sweats, and shortness of breath, prompting her to visit the emergency department. Breast ultrasound showed bilateral breast and axillary lymphadenopathy suggestive of metastatic/neoplastic process, and chest X-ray showed a large anterior mediastinal mass. Further workup led to the diagnosis of T- cell acute lymphoblastic leukemia (T-cell ALL). The patient was started on a pediatric regimen using the children's oncology group (COG) AALL0434 protocol. The patient achieved complete remission following induction chemotherapy with the resolution of her presenting symptoms.

Conclusion: Breast infiltration is a rare presentation of T-cell ALL but should be among the differential diagnoses of breast masses, especially if the work up pointed towards a hematological process. This uncommon presentation of ALL represents a diagnostic challenge as it can be mistaken with primary breast lesions.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 23 Category: Research

Program: St. Joseph Mercy - Ann Arbor
Program Director: Patricia McNally, MD, FACP
Presenter: Dario Manley
Additional Authors: Rishin Handa, Harshil Patel, Bhavana Toprani, Anupam Suneja

Pilot Study of Impact of Vivify Remote Patient Monitoring Versus Conventional Homecare on 30-day Readmissions in CHF Patients

Introduction:
In the US, Congestive Heart Failure (CHF) is an expensive diagnosis with an estimated cost of $2.7 billion in 2013 for 30-day readmissions. Post-discharge options for patients with CHF include Home Care ConnectTM utilizing Vivify and conventional home care. Vivify remotely monitors weight and vital signs daily utilizing a 4G-tablet and features video-enabled calls if needed. Conventional homecare provides home nursing visits with phone call support. Our study compares all-cause readmissions between Vivify and conventional homecare.

Methods:
Retrospective, cohort study of patients with CHF discharged with home care from a teaching community hospital from May 2017-April 2018. Exclusions: hospice discharge. We compared the impact of type of home-monitoring and role of post-discharge practitioner visits on all-cause 30-day-readmissions using multivariable logistic regression.

Results:
On average, patients were 76 years old, ejection fraction (EF) was 36%, and 50% saw a practitioner within 30 days of discharge. 30-day-readmissions for conventional homecare and Vivify were 18.6% (13/70) and 24.6% (16/66), respectively, with OR 0.7 (P=0.39). Multivariable logistic regression demonstrates conventional homecare has OR of 0.32 (P=0.022) when adjusting for EF, age, gender, race, PRISM, and practitioner visit. In the same model, seeing a practitioner had an adjusted OR of 0.26 (P=0.005).

Discussion:
Our study demonstrates that all-cause 30-day readmissions is lower with conventional home care than Vivify, and in those seeing a provider post-discharge compared to those who do not. Small sample size may limit reliability and larger studies of Vivify are needed.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 24 Category: Research

Program: St. Joseph Mercy - Oakland
Program Director: Geetha Krishnamoorthy, MD, FACP
Presenter: Jasmeet Kaur
Additional Authors: Sumeet Yadav, MD; Ambreen Malik, MD; Olusola Ogundipe, MD; Geetha Krishnamoorthy, MD, FACP

Role of Primary Hypercoagulable States in the Occurrence of Heparin-Induced Thrombocytopenia

Background and purpose: There is no clear data on the relationship between primary hypercoagulable states and Heparin-Induced Thrombocytopenia (HIT). In a case-control study, we analyzed risk factors for HIT and the association between primary hypercoagulable states and HIT using National Inpatient Sample (NIS) data.

Methods: Part I: Cases/controls: Hospitalized patients with/without HIT. Several variables reached significance; we found primary hypercoagulable states increase HIT risk. Part II: We analyzed the variables that may further increase HIT risk in patients with primary hypercoagulable states. Cases/controls: Hospitalized patients with primary hypercoagulable states with/without HIT. Group differences between patients with and without HIT were analyzed using the chi-square or Fisher's exact test. Differences were considered statistically significant for a p-value < 0.0005. Factors reaching the level of statistical significance in univariate analysis were included in exploratory multivariate logistic regression models using stepwise regression analysis.

Results: Age > 65, obesity, solid organ cancers, lymphoma, diabetes, renal failure, paralysis, and weight loss were associated with increased HIT risk. HIT is 8.5 times (3.4% versus 0.4%, $p < 0.0005$), more likely in the presence of primary hypercoagulable states. HIT occurred more frequently in patients with primary hypercoagulable states and renal failure (OR 2.092, 95% CI 1.469 – 2.979, $p < 0.0005$), or systemic lupus erythematosus (SLE)/Rheumatoid arthritis (RA) (OR 2.254, 95% CI 1.451 – 3.499, $p < 0.0005$).

Conclusions: The increased HIT risk in primary hypercoagulable states, especially with concomitant renal failure, SLE/RA suggests that unfractionated heparin should be used cautiously in patients with primary hypercoagulable states.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 25 Category: CQI/EBM

Program: St. Joseph Mercy - Oakland
Program Director: Geetha Krishnamoorthy, MD, FACP
Presenter: Vanessa Ogundipe
Additional Authors: Annie Burcheci, MD; Benjamin Diaczok, MD, FACP

Reducing Racial Disparities in a Community Hospital Internal Medicine Resident Clinic

Introduction

Racial and ethnic minorities receive lower quality of healthcare, even when factors such as insurance status and income are controlled. St. Joseph Mercy Oakland Internal Medicine (SJMO IM) resident clinic serves a diverse patient population in Pontiac, Michigan. From 2012 -2014, residents collected data on annual preventive visits and found racial minorities, particularly Hispanic patients, were offered less cancer and diabetic screening.

Methods

In 2019 the SJMO IM program implemented a preventive medicine visit template and a Disparities and Inequalities curriculum consisting of didactics, small group discussions and a “windshield tour”. Clinic quality metrics were collected and rates of cancer and diabetic screening tests at annual preventive visits were measured.

Results

From August to December 2019, 420 patient charts were reviewed. There were 126 preventive medicine visits. Analysis of clinic demographics showed a reduction in the Hispanic population from 20% (2014) to 6%. There was no significant racial disparity in rate of colonoscopy ($p=0.141$) or mammogram ($p=1.0$). However, screening lipid panel was ordered less often for racial minorities (84.9%; 65.2%; $p=0.02$). Diabetic screening tests including hemoglobin A1C and monofilament test were not analyzed due to small sample size.

Discussion

Results show that following an intervention, racial disparity for ordering cancer screening tests decreased. We also found that clinic demographics had shifted to include fewer Hispanic patients; the previous study showed low rates of annual preventive screening tests among this population. There is an ongoing need for study in order to improve cultural competency and retain a diverse patient population.

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Oral # 26 Category: Research

Program: St. Joseph Mercy - Oakland
Program Director: Geetha Krishnamoorthy, MD, FACP
Presenter: Mayuri Kulkarni
Additional Authors: Benjamin Diaczok , Jiries Qaqish

Improving Transitions of Care: Do Resident Self-Improvement Projects Increase Use of "CORES" and Reduce Rapid Responses?

INTRODUCTION
Transitions-of-care failure accounts for 60% of sentinel events. In response, sign-out education strategies are given. We measured the effectiveness of our sign-out training and investigated whether small group training sessions improves resident participation in sign –outs and decreases rapid responses (RRT).
METHODS
Internal medicine residents receive sign-out training utilizing CORES, an electronic sign-out embedded in PowerChart, and are assigned to inpatient teams consisting of a senior and two interns. 4pm verbal sign-outs are given after CORES completion. CORES participation data for teams A-D was collected after sign-out rounds the first week. This data was presented to each resident the second week. Residents were required to review their data with the investigator, review quality improvement processes, and develop a self-improvement plan. The third week, residents discussed their plans with the investigator. The fourth week CORES participation was collected. Nursing office RRT data was obtained.
RESULTS
Data was collected for the months of June through October 2019. 37/50 residents participated. Data on 876 patients and 1,894 CORES opportunities (patient days) was collected. Overall, CORES participation rose from 58.1% pre- to 65.8% post-intervention ($p = 0.192$ Students T test). The RRT rate pre-intervention was 0.0235 and post-intervention was 0.0271 ($p = 0.73$ Students T test).
DISCUSSION
Non-statistically significant increase in CORES participation was observed with no significant reduction in rapid responses. Residents were not blinded. Some residents participated multiple times. Pre-intervention baseline increased in subsequent months. 3/4 teams demonstrated improvement in CORES while one demonstrated reduction. Overall, this intervention increased cores participation.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 27 Category: Clinical Vignette

Program: Wayne State University – Detroit
Program Director: Eric Ayers, MD, FACP
Presenter: Crystal Ajja
Additional Authors: Dr. Heather Abraham

Making the Case for Aliskiren

Introduction

Refractory hypertension is defined as uncontrolled blood pressure unresponsive to greater than or equal to 5 anti-hypertensives at maximal dosages. This case explores the utility of aliskiren in refractory HTN. Aliskiren is a direct renin inhibitor that decreases the conversion of angiotensinogen to angiotensin I.

Case Description

Our 50 year-old male patient has a history of HFpEF and complicated renal transplant resulting in uncontrolled HTN and fluid overload. He initially presented to the ED with progressively worsening dyspnea/orthopnea, edema, anasarca, and CXR findings consistent with significant volume overload. He was found to have an elevated BP of 210/109. Patient's home medications included multiple anti-hypertensives, including clonidine 0.2 mg BID, hydralazine 100 mg TID, carvedilol 25 mg BID, furosemide 40 mg BID, nifedipine 60 mg BID, spironolactone 25 mg BID, and isosorbide mononitrate 30 mg daily. Although he reported adherence to this cumbersome regimen, his blood pressure remained uncontrolled, both outpatient and in the hospital.

Despite being on maximum doses of his antihypertensive medications, regulation of his HTN was unsuccessful. On day 9 of admission, aliskiren was added to the regimen for "refractory HTN." Blood pressured dropped from the 190s/90s to 110s/60s with aliskiren within 48 hours. There was a 0.3 increase in creatinine within 24 hours of administering aliskiren.

Discussion

It is important to consider aliskiren in lowering refractory HTN. This case demonstrated the use of aliskiren in conjunction with multiple other hypertension medications. The use of aliskiren alone was not assessed, but may have implications for future use.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 28 Category: Research

Program: Wayne State University – Internal Medicine – Rochester Hills
Program Director: Sarwan Kumar, MBBS, FACP
Presenter: Verisha Khanam
Additional Authors: Ankita Aggarwal, Anubhav Jain, Jurgena Tusha, Mishita Goel, Sourabh Bidhan, Ameer Khan, Monica D, Dr. Tegeltija, Dr. Kumar

Impact of Angiotensin Converting Enzyme Inhibitors/Angiotensin Receptor Blockers on Mortality and Severity of Covid-19 Pneumonia

Introduction: Coronaviruses bind to target cells through angiotensin-converting enzyme 2 (ACE2), expressed by epithelial cells of the lung, intestine, kidney, and blood vessels. Hypothetically, increased expression of ACE2 would facilitate infection with COVID-19 and treatment with ACE2-stimulating drugs may worsen infection with COVID-19. The goal of this study was to analyze the severity of COVID-19 in patients on ACEi and ARB therapy.

Methods: A total of 200 patients admitted with confirmed COVID 19 infection between March and April 2020 were included in the study. They were then separated into two groups, patients on ACEi/ARBs and patients not on those medications. The baseline characteristics of two groups were compared along with their mortality rate, ICU admission, intubation requirement, and length of hospitalization.

Results: We found a total of 64 patients received either ACEi or ARB during the hospital stay. There was no difference in the rate of inpatient mortality in patients who received the medication vs who did not (32.3% vs 23.5% p- value 0.19). Similarly, there was no difference in the other outcomes including rate of intubation (22.6% vs 24.4% p- value 0.79), requirement for ICU admission (21% vs 33.3% p-value 0.07) and mean total length of hospital stay between the two groups (9.5 days vs 8.4 days p-value 0.34).

Conclusion: Patients who received ACEi or ARBs did not have worse outcomes compared to those who did not. Therefore, these medications can safely be continued in patients with COVID 19 pneumonia. Further large center studies are, however, required to confirm our findings.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 29 Category: Research

Program: Wayne State University – Internal Medicine – Rochester Hills
Program Director: Sarwan Kumar, MBBS, FACP
Presenter: Jurgena Tusha
Additional Authors: Verisha Khanam, MD., Vesna Tegeltija, MD., Sarwan Kumar, MD.

The MuLBSTA Score: Predicting Risk of Mortality and Disease Severity in Patients with COVID-19 Pneumonia

Introduction: An influx of SARS-COV2 infection has led to several unanswered questions, one such question raised was how to risk stratify these patients in order to better direct further management. The MuLBSTA score is designed to predict 90-day mortality in patients with viral pneumonia.

Methods: A single centre, retrospective chart review of 163 hospitalized patients with COVID-19 pneumonia.

Results: A total of 163 patients were manually reviewed, of which there was an overall mortality rate of 29.4%, an ICU mortality rate of 50.9% and ventilator associated mortality of 62.8%. The MuLBSTA score was applied to each patient manually at time of hospitalization. There was a mean MuLBSTA score of 8.67 (4.066) for patients who survived and a mean MuLBSTA score of 13.6 (1.87) for patients who died. There was a significant positive correlation of the MuLBSTA score with mortality (OR = 1.37, 95% CI 1.23-1.53, p = .0001). The area under the receiver operating characteristic (ROC) curve of MuLBSTA for predicting in-hospital mortality at time of admission was 0.813(SE 0.037). A positive correlation was also found with ventilator support (OR= 1.30, 95% CI 1.17-1.44, p= .0001) and length of stay (r (161) =.35, p<.0001).

Conclusion: Analysis of data indicated that in patients with COVID-19 pneumonia, the MuLBSTA score successfully stratified hospitalized patients based on severity and accurately predicted overall outcome. This score correlated significantly with mortality, ventilator support and length of stay, which may be used to provide guidance to screen patients and make further clinical decisions.

ACP Michigan Chapter Scientific Meeting 2020

Oral # 30 Category: Clinical Vignette

Program: Western Michigan University School of Medicine - Kalamazoo
Program Director: Joanne Baker, DO, FACP
Presenter: Ricardo De Castro
Additional Authors: Ladizinky, A., Lima, N.A., Lessa, M.G., Leitao, D.S., Avner, B

Ear Swelling and an Unusual Diagnosis of Cutaneous Leishmaniasis

Introduction

Leishmaniasis is recognized as an endemic human disease in tropical countries but is uncommon in the United States. Its manifestations are broad and mimic inflammatory processes and neoplastic diseases. Whereas in endemic areas the diagnosis may be simple, it could be a real challenge in places with a low incidence of this disease.

Case presentation

Patient is a 51-year-old woman with diabetes complaining of ear pain and redness. Her symptoms started one month after a trip to Mexico. She noticed a small nodule in her ear which became swollen and red within weeks. An initial diagnosis of cellulitis was given, and she started on antibiotics. As the lesion was progressing, her antibiotics were switched, and drainage was attempted. However, no significant improvement was seen, and prednisone was added for possible polychondritis. A biopsy was performed with suspicion of possible skin cancer. Pathology reported a granulomatous inflammation process with parasitized histiocytes. Further investigation showed the presence of Leishmaniasis. Patient started on appropriate treatment with good recovery.

Discussion

Infection with protozoan parasites of the genus Leishmania leads to a wide variety of clinical disease syndromes. Cutaneous leishmaniasis (CL) includes different presentations with the most common being typical chronic, ulcerative lesion. Usually, it starts with a slowly progressing, nonhealing skin ulcer. The differential is broad including inflammatory and neoplastic diseases. Most CL resolves over time without specific treatment, but often patients seek medical care because of the location of disease, cosmetic concerns, or secondary bacterial infection.