ACP Michigan Chapter Scientific Meeting 2021

Poster # 1 Category: Clinical Vignette

Program: Ascension Genesys Hospital
Program Director: Barbara Pawalaczk MD
Presenter: Lara Guindi
Additional Authors: Tamara Ivers, MD; Lauren Yoo, DO

A Case of BRASH Syndrome Requiring Emergent Hemodialysis in a Patient with No Prior Renal Disease

Introduction:
BRASH syndrome is an observable constellation of signs describing bradycardia that is a result of decreased AV nodal blocking agent clearance in the setting of acute renal failure and hyperkalemia.

Case:
67 year old female with history of hypertension on labetalol and verapamil, recent orthopedic surgery one week ago presented from a rehabilitation facility with bradycardia, lethargy, weakness, and dyspnea requiring supplemental oxygen. She denied nausea, vomiting, or diarrhea. An ECG revealed a junctional bradycardia with a rate of 41 that was not responsive to atropine. Laboratory analysis included sodium of 118, potassium of 6.8 refractory to treatment, creatinine of 6.14, increased from normal one week prior, and a metabolic acidosis with a pH of 7.15. A TSH, troponin and all other labs were normal. She received emergent dialysis with complete resolution of electrolytes and kidney function. Shortly after, the patient returned to sinus rhythm and did not require further hemodialysis.

Discussion:
BRASH syndrome, though growing in recognition, is still a widely under-diagnosed disease. It is described as acute renal failure with hyperkalemia resulting in refractory bradycardia. This is due to the kidney being unable to clear AV nodal blocking agents secondary to electrolyte abnormalities. The precipitating factor of the acute renal failure is unclear however in this case it was suspected to be dehydration in a patient without history of renal dysfunction who was not taking any NSAIDS or other nephrotoxic agents. The syndrome itself is an emergent situation and requires prompt intervention when recognized, as typical treatments for bradycardia will not resolve the underlying issue. Emergent dialysis is necessary to prevent further complications and shorten length of stay.

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Poster # 2 Category: Clinical Vignette

Program: Ascension Macomb-Oakland Hospital
Program Director: Deborah LeVan, DO
Presenter: Rani Kattoula
Additional Authors: Aragon A Javier Aguilar, MD

Pelvic Actinomycosis from IUD Mimicking Ovarian Tumor

Pelvic actinomycosis is a very rare disease that can occur in women with longstanding intrauterine device use. It often is looked over on a differential diagnosis and thus is diagnosed and treated surgically most times. This case presents a 54 year old woman that initially came to our hospital complaining of generalized abdominal pain, with an exam demonstrating a firm abdominal mass about 5 cm above the pubic symphysis and a CT of the Abdomen/Pelvis revealing large left-sided ovarian mass. Further imaging including TVUS and MRI was not able to delineate whether this was a cyst, abscess or solid tumor. During her hospital course, there was strong suspicion for gynecologic malignancy given the patientâ€™s positive family history and thus CEA and CA 125 levels were obtained but found to be within normal limits. She was later boarded for possible laparotomy and robotic hysterectomy in further surgical investigation of this mass. The samples of th e adnexal mass was sent to pathology for examination â€“ which later demonstrated no malignant cells, but rather, Actinomycosis with acute on chronic inflammation. The patient was subsequently started on ertapenem and ultimately had resolution of her symptoms. Most providers involved in the case were suspecting the mass to be solid tumor, which may be reasonable considering that actinomycosis-related abscess is very rare. In hindsight, this case should provide an important teaching point that invasive procedures and major surgeries could be avoided with thorough histories and broadened differentials. While it may not be as common to suspect, Actinomycosis-induced PID and abscesses are possible and should be included in the differential diagnosis and could prevent major surgeries for select patients.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 3 Category: Clinical Vignette

Program: Ascension Macomb-Oakland Hospital
Program Director: Deborah LeVan, DO
Presenter: Rani Kattoula
Additional Authors: Franco Parodi, MD

Hemopericardium as a Complication of Ischemic Hepatopathy

Hemopericardium is a rare complication that involves blood collecting in the pericardial sac. When observed, it is usually associated with chest trauma, myocardial infarction or from anticoagulation. We present the case of a 43 year old male with vesicoureteral reflux requiring dialysis, previous MI and muscular dystrophy that presents with feelings of weakness and cold intolerance after his dialysis and covid vaccine that he received the day prior. He arrived with acute anemia which led to presumably hypovolemic shock, altered mental status, severely elevated liver enzymes and coagulopathy. The following day he had a cardiopulmonary arrest and with bedside POCUS, tamponade physiology was identified. Approximately 1 liter of sanguineous fluid was drained from pericardiocentesis. While literature has demonstrated that anticoagulation can precipitate sponanteous hemoparidcardium, further resulting in pericardial tamponde - there is a paucity, if any, reports of the coagulopathy of acute liver injury resulting in hemopericardium. However, one can deduce that the coagulopathy from hepatic injury can causes abnormal hemostasis just as it would in patients receiving anticoagulation. Similarly, tamponade can also reinforce the complications of poor perfusion to the liver and result in a similar presentation. This case serves as an important reminder to be mindful of the synthetic function of the liver during injury as it may lead to diagnoses that can be caught earlier on presentation. It also should help encourage physicians to engage in education of point-of-care ultrasound as it has, at many times, proven to be a life saving modality in the patient undifferentiated shock.

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Poster # 4 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Sangeeta Adusumilli
Additional Authors: Sangeeta Adusumilli, MD; Souheyla Bachiri, MD; Michael Kern, MD

Sickle Cell Anemia and Cavernous Carotid Artery Aneurysm

Introduction: Intracranial Aneurysms are an unusual complication of Sickle-cell Anemia with predominance in the adult population. We herein present a case of Cavernous Carotid artery aneurysm which is a rare complication of Sickle cell patients

Case presentation: 66-year-old female patient with past medical history of sickle cell disease SS type, hypertension presented with a chief complaint of headache. She endorsed sudden onset of headache, present over the bilateral frontal area, nonradiating, constant, throbbing, 10/10 intensity, associated with photophobia, denied nausea, vomiting, or aura. She had taken Tylenol extra strength at home, with no relief. On admission, fluid and pain management were initiated, but headache persisted. CT Head showed no acute findings. MRA showed evidence of an aneurysm measuring 5 mm in diameter which extends medially from the left cavernous carotid artery into the region of the suprasellar cistern. Diagnostic Cerebral Angiogram showed the left superior hypophyseal artery and left Posterior communicating artery aneurysms with high risk features for rupture. She was started on high dose Aspirin, Plavix, and went to the operating room, showed a total of 4 aneurysms: PCOM, Superior hypophyseal, ophthalmic artery, and anterior choroidal artery aneurysms. She had successful pipeline embolization and stent placement. Her headache improved, she was deemed stable for discharge.

Discussion: Patients with Sickle cell anemia usually present with thrombotic complications, but very rarely have intracranial aneurysms. Pathophysiology possibly includes endothelial injury from the abnormal adherence of sickle erythrocytes, which is the initiating event in arterial wall injury. Hemodynamic stress at these loci of arterial wall damage results in aneurysm formation. Surgical repair is found to be beneficial with good recovery. Presence of these Aneurysms increases the formation of silent cerebral infarcts and overt Strokes. Careful consideration of aneurysm should be made during evaluation of sickle cell anemia patients presenting with intractable headaches

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Poster # 5 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Hussein Almadhoun
Additional Authors: Rebekah Bjorklund, Paul Kudla, MD

Metronidazole-Induced Acute Pancreatitis Presenting with Chest Pain

Introduction:
Medication-induced pancreatitis accounts for less than 5% of acute pancreatitis cases, and metronidazole has been reported to be a cause in multiple case reports with a positive rechallenge. There is an increased risk of acute pancreatitis within 30 days of exposure to oral metronidazole. This patient presented to our facility for a complaint of chest pain and subsequently was found to have acute pancreatitis secondary to metronidazole treatment for bacterial vaginosis.

Case:
A 38 year-old female presented with a chief complaint of chest pain. She stated that for the past 24 hours, she was experiencing constant, sharp, reproducible chest pain, 10 out of 10 at its worst, non-radiating and associated with two episodes of non-bloody, nonbilious vomiting and sweating. Further questioning revealed that the patient began taking metronidazole two days prior to the onset of her symptoms for bacterial vaginosis diagnose. The acute coronary syndrome workup was negative, prompting further investigation into abdominal pain and vomiting. She was found to have an elevated lipase. The patient denied alcohol and illicit substance use. Laboratory results showed lipase level of 460 IUnits/L, triglycerides level at 94, autoimmune pancreatitis workup was negative.

Discussion/Conclusion:
Although rare, acute pancreatitis is a known side effect of metronidazole. Approximately 0.3-1.4% of the general population that is prescribed a medication with a known potential side effect of acute pancreatitis will subsequently develop acute pancreatitisâ□µ. While metronidazole is a drug widely used to treat many infections, other reports have shown that a medication rechallenge should not be attempted for risk of a recurrent episode pancreatitisâ□´. It is unknown how metronidazole causes pancreatitis, which makes this an important topic to further expound upon to prevent future cases. It is imperative that pancreatitis is a differential in a chest pain and vomiting workup after other etiologies have been excluded.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 6 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Hussein Almadhoun
Additional Authors: Paul Kudla

COVID-19 Associated Postural Tachycardia Syndrome in Pregnancy

Postural tachycardia syndrome (POTS) affects around 500,000 Americans every year, particularly younger adults, causing decreased quality of life due to orthostatic intolerance in response to postural changes. POTS can be unmasked after a recent systemic infection, dehydration, or even pregnancy.

Case: A 37-year-old female, 21 weeks pregnant presents because of shortness of breath, chest tightness. She tested positive for Covid-19 two weeks earlier. Symptoms were described as mild cough, runny nose, and fatigue. Three days prior to admission, she seemed to have more shortness of breath with minimal exertion, along with chest tightness and heart racing. She denied any fever, chills, sore throat, or history of blood clots. Given the risk factors for pulmonary embolism, she had a bedside echocardiogram that did not reveal any evidence of RV strain. CTA chest was negative for pulmonary embolism. Duplex US of the lower extremities was negative for DVT, and echocardiogram showed normal EF. There was no clinical evidence of pneumonia. Procalcitonin was low. Orthostatic vitals showed normal blood pressure on supine, sitting and standing positions. However, heart rate increased from 80 in a supine position to 150 standing, leading to the diagnosis of POTS.

Discussion: Even mild symptoms of Covid-19 infection might lead to exaggerated systemic response such as POTS which can be debilitating. This can be exacerbated by other risk factors like pregnancy. The mechanism is multifactorial but mainly contributes to autonomic neuropathy. SARS-CoV-2 might lead to dysfunction of the extracardiac postganglionic sympathetic nervous system neurons which leads to more cardiac sympathetic outflow which presents like neuropathic POTS.

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Poster # 7 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Talal Bazzi
Additional Authors: Dr. Mujtaba Cherri and Dr. Elizabeth Banksthal

Blebs, Bullae and Tension Pneumothorax; A late complication of COVID-19

Patients with COVID-19 usually recover completely with minimal complications upon resolution, however, it has been demonstrated post-infectious complications include continued dyspnea, myalgia, loss of taste and other more serious complications.Â A 60-year-old female with a history of common variable immunodeficiency (CVID) and hypothyroidism presents with recurrent pneumothorax is a late complication of COVID-19.A 60-year-old female with a history of CVID, hypothyroidism, and COVID-19 pneumonia diagnosed in December 2020 presented with dyspnea and left-sided pleuritic chest pain.Â She was treated a few months earlier for COVID-19 pneumonia with complication of right-sided spontaneous pneumothorax.Â She was discharged but continued to experience dyspnea.Pulmonary function testing in the outpatient setting showed a moderate restrictive lung defect with severe decrease in diffusing capacity (DLCO space 6.8mm/mmHg/min).Â CT thorax at that time showed residual current elevation in the right upper lobe. The Patient then returned to the emergency room months later complaining of dyspnea chest pain requiring 4 L nasal cannula.Â CT of the chest showed a large tension pneumothorax with near complete collapse of the left lung as well as multiple right upper lobe emphysematous blebs and bullae not seen on the previous CT. Cardiothoracic surgery placed a chest tube and following a 5-day hospital course she had a pneumostat valve placed discharged home on room air. This case habits the importance of continued consideration for long-term complications of COVID-19. Reports of diffuse alveolar injury caused by the virus can result in emphysematous changes ultimately leading to alveolar rupture such as this patient. Although pneumothorax is uncommon late complication, it should be on the differential diagnosis for COVID-19 patients with sudden respiratory decompensation. As a life-threatening event, it requires prompt recognition and treatment to decrease both morbidity and mortality.

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Poster # 8 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Harish Gidda
Additional Authors: Khalid Alfares, MD; Nikoletta Proudan, DO

Euglycemic DKA Post Bariatric Surgery in Type II DM in the Setting of SGLT2-Inhibitor Use – A Case Report

Introduction:
Current AACE recommendations are to stop SGLT-2 inhibitors, at least 24 hours prior to elective surgery, invasive procedures, or anticipated stressful activity. However, case reports suggest the pharmacologic effects of SGLT2 inhibitors persist beyond 5 half-lives of elimination (2-3 days), with glucosuria and ketonemia lasting up to 9 to 10 days after discontinuation.

Case:
A 51-year-old female, past medical history of hypertension, morbid obesity, DM type II, hyperlipidemia and GERD, admitted to the hospital for elective bariatric surgery. Post-operative day 1, she became tachypneic and lethargic, however alert, oriented and responding appropriately. Lab work showed blood glucose levels <200 mg/dl (70-200 mg/dl), pH 7.21 (7.35-7.45), anion gap of 36 (4-14 mol/L), bicarbonate of 3 (23-34 mmol/L), pCO2 of 6 (35-45) and Potassium of 2.6 (3.5-5.2 mmol). Urine analysis showed glucose >500mg/dl (0 mg/dl) and ketones 80 mg/dl (0 mg/dl). After reviewing her home medications, it was found that she was on Canagliflozin, a SGLT2 inhibitor, stopped 2 days prior to surgery and Glargine/Lixisenatide stopped 2 weeks prior as recommended by her endocrinologist. Patient was diagnosed with euglycemic DKA. She was started on an insulin drip following potassium replacement and IV fluids with close monitoring of her electrolytes and blood sugar levels. Over the next few days, she started to feel better. PH, bicarb, anion gap and potassium all trended toward normal limits. She was transitioned off insulin drip to basal-bolus insulin regimen, discharged on post-operative day 7 with the instruction to not take any SGLT2 inhibitors.

Discussion:
SGLT-2 inhibitors are known to cause euglycemic DKA and ketosis. Our case brings to attention that discontinuation of SGLT2 inhibitor treatment 48 hours prior to surgery may not be adequate specially giving the half-life of the medication. The optimal timing of discontinuation remains unknown. Further studies are needed to evaluate if longer withholding period may be required(1).

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Poster # 9 Category: Clinical Vignette

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

Weed and The V Leads: A Case of Brugada Syndrome Elicited After Marijuana Use

Introduction: Brugada syndrome is an autosomal dominant disorder which can present with syncope, palpitations, or cardiac arrest. The condition may be precipitated by fevers, medications, metabolic disturbances, like hyperkalemia, as well as toxins, like cocaine. We present a case of Brugada syndrome likely elicited by cannabinoid use.

Case Presentation: Patient is a 42-year-old male with hypertension, type 2 diabetes, and a 30-year cannabinoid use history who presented after a syncopal episode. Patient had increased his cannabis use to six joints per day. A week prior, patient had nausea and recurrent episodes of emesis. He endorsed cannabinoid use before feeling suddenly diaphoretic, lightheaded, and having a witnessed syncopal episode. He denies any seizure disorders, and had one similar episode seven years ago with unknown workup. Patient was hypotensive on admission, and labs indicated a nonoliguric acute kidney injury, negative troponins, and no electrolyte disturbances. Urine drug screen was positive for cannabinoids. EKG did show a coved type ST segment elevation in leads V1 and V2, typical of the Brugada pattern. He did not have previous EKGs with similar patterns. During his stay, his emesis resolved, and cardiology recommended an outpatient loop recorder for close monitoring. He was advised extensively to decrease his cannabinoid use.

Discussion: There have been numerous reports of many antiarrhythmic agents, as well as antibiotics and psychotropic medications that elicit Brugada syndrome. It is hypothesized that the myocardial sodium channels may be defective in this genetic disorder, reducing the duration of action potentials, leading to typical ST elevation patterns seen in Brugada syndrome. It follows that drugs like cocaine, which can act like class I antiarrhythmic agents, can result in this Brugada pattern. However, cannabinoids are not currently hypothesized to affect such sodium channels. The presence of Brugada syndrome elicited by cannabinoid use may hint at a relationship.

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Poster # 10 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Rida Jamal
Additional Authors: Jaffery, S MD; Rozzell, D MD

The Clot Thickens: COVID-19 and Thromboses Leading to Acute Limb Ischemia

Introduction: Thrombotic complications in patients with COVID-19 have been suggested due to endothelial dysfunction, cytokine release, and hypercoagulability effects of the virus. Typically, these present as venous thromboembolisms. However, thrombosis of arteries has also been noted, and can lead to acute limb ischemia. We discuss a patient who presented after cardiac arrest, likely exacerbated by hypoxia due to COVID-19, and the subsequent sequelae of microthrombi, dry gangrene, and amputations.

Case Presentation: Patient is a 64-year-old male with a history of hypertension, type 2 diabetes mellitus who initially presented after having a cardiac arrest and subsequently testing positive for COVID-19. He was intubated, but recovered to require no oxygen support. Patient was noted to have bilateral dorsalis pedis, right anterior tibial, bilateral radial artery, as well as right common femoral vein thrombosis. Hypercoagulability work-up resulted in normal ANA, beta-2 glycoprotein, cardiolipin, rheumatoid factor, hepatitis B, C, and TSH levels. His extensive thrombosis was attributed to the prothrombotic nature of COVID-19. The patient was initially sent home on Plavix, as well as Eliquis for his clot burden. Patient returned to the hospital a few weeks later with dry gangrene of bilateral lower extremities, as well as his left index finger. Vascular surgery performed a right transmetatarsal amputation, and left below-knee amputation, as well as a left index finger amputation. His hospital course was complicated by sepsis secondary to surgical site infections, which resolved with antibiotics and bilateral wound vacuum placements.

Discussion: Acute leg ischemia remains a complication of COVID-19, affecting 3 - 15% of patients hospitalized with COVID-19, although this remains an understudied population. When acute limb ischemia is suspected, it is important to act efficiently to salvage the limb. Therapeutic anticoagulation must be initiated, and surgical interventions to help with revascularization and prevent further limb loss must be undertaken with urgency.

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Poster # 11 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Madhav Kapila
Additional Authors: Nancy Mesiha, MD

The Dangers of Electrolyte Replacement

Introduction

Hyperkalemia is a common clinical problem that physicians often face. It is most commonly caused by impaired renal function or medication side effects. If left untreated, it can have severe effects which may include muscle paralysis and cardiac arrhythmias. It is important to monitor patients closely when replacing electrolytes.

Case Presentation

A 73-year-old male with a past medical history of hypertension, diabetes mellitus, prostate cancer, COPD, and prior CVA presented to Ascension St. John Hospital for generalized weakness and shortness of breath. While in the emergency room, EKG showed a wide-complex tachycardia consistent with hyperkalemia. Synchronized cardioversion was attempted and several minutes after, the patient had a cardiac arrest that lasted 8 minutes. After the patient was stabilized, his labs were reviewed, and he was found to have a potassium level of 9.7 mmol/L. The patient had been seen in the hospital several weeks earlier for hypokalemia which was assumed to be from diuretic use. The patient was discharged at that time with 40 mEq of potassium to take daily for 30 days and amiloride 5 mg daily. The patientâ€™s wife stated that she was under the impression that he should be on 80 mEq of potassium per day instead. In addition, he missed his follow up appointment outpatient. The patient had an extensive hospitalization with a prolonged stay in the medical ICU requiring continuous renal replacement therapy.

Case Discussion

This illustrates the dangers of hyperkalemia and the importance of close monitoring of electrolyte supplementation. Patients need to be properly educated regarding these supplements with close follow up of electrolytes once they are discharged from the hospital. In many cases, patients in the hospital do not follow up and sending them out on a prolonged course of electrolyte replacement can have serious consequences.

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Poster # 12 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Bola Nashed
Additional Authors: Sara Samaan MD, Kamath Raghavendra MD

A Puff of Smoke

Introduction: Moyamoya is Japanese for hazy-like a puff of smoke, describing a finding on angiography resulting from the formation of collaterals due to a large intracranial artery occlusion. The incidence of Moyamoya in the US is 0.57 per 100,000 persons/year and being more described in patients of Asian descent.

Case: A 32-year-old Asian male with type 2 DM and tobacco use, presented with headache, slurred speech, and right arm numbness that resolved spontaneously within 2 hours of onset. The patient reported episodes of similar headaches in the past. Physical exam showed hypertension but was otherwise normal. Laboratory testing was remarkable for Leukocytosis of 16000, triglycerides of 396, and HbA1c 11.6%, ANA and ESR were negative. He was started on Aspirin and Atorvastatin while in the ED. CT brain without contrast was negative for hemorrhages. CT angiography revealed narrowing of the bilateral ICA and stenosis of the ACA and MCA. MRI showed two punctate areas suggestive of watershed infarctions in the subcortical white matter of the right parieto-occipital region and an area of infarction within the cortex of the inferior left insula. Diagnostic cerebral angiogram revealed the right internal carotid artery to be small, irregular, and ending in a tangle of tiny irregular arteries, with s tenosis of the left MCA consistent with Moyamoya. Echocardiogram revealed an EF of 40% with severe hypokinesis of the apical wall. He was started on Carvedilol and lisinopril. The patient had no neurological deficits, he was discharged and instructed to follow up with his PCP, neurology and cardiology as an outpatient to continue ischemia workup.

Conclusion: Ischemic strokes and TIAs are the most common presentations of Moyamoya, which could be primary or secondary. Diagnosis requires neurovascular imaging. Patients should be further evaluated for underlying conditions including vasculitis and atherosclerotic disease.

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Poster # 13 Category: Clinical Vignette

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Freny Sebastian
Additional Authors: Villatoro-Santos, Claudia MD PhD, Maki, Safa MD MPH

Acute Limb Ischemia But Who's To Blame? COVID-19 or Its Vaccine?

Introduction: Hypercoagulable state in COVID-19 and venous thrombosis have been commonly linked, but arterial thrombotic events are less common. There have been several reports of arterial and venous thrombosis associated with viral vector Janssen COVID-19 vaccine, described as vaccine-induced immune thrombotic thrombocytopenia (VITT). We present a case of serious arterial thrombosis within a month of receiving the vaccine, and contracting COVID-19 infection.

Case Presentation: A 59-year-old Caucasian male with hypertension, diabetes and Crohn's disease presented with sudden onset left lower leg pain, swelling and bluish discoloration. Patient had received the J&J vaccine followed by a positive COVID-19 PCR test 22 days and 11 days before presentation, respectively. Upon admission, his COVID-19 antibodies were undetectable, platelets were 444, and hemoglobin was 8.8. CT angiography revealed over 70% occlusive thrombus in the left common iliac artery and patient underwent emergent surgical thrombectomy and repair of popliteal artery with fasciotomy. Unfortunately, significant blood loss followed by profound thrombocytopenia prevented anticoagulation use temporarily, post operatively. Subsequently, PF4 HIT antibody and hypercoagulability workup came back negative. Eventually, the patient underwent a left above the knee amputation 10 days after presentation. Following surgery he received Enoxaparin 120 mg injections twice daily, and was transitioned to Rivaroxaban15 mg twice daily for 3 weeks followed by 20 mg daily for 3 additional weeks.

Discussion: This profound hypercoagulability status resulted in large vessel arterial occlusion in the setting of COVID-19 infection and questionable VITT on presentation. It is important to investigate these events immediately and start prompt treatment with a multidisciplinary team approach.

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Poster # 14 Category: Research

Program: Ascension St. John Hospital - Grosse Pointe
Program Director: Raymond Hilu, MD, FACP
Presenter: Wei Zhao
Additional Authors: Nikhil Gandhi, DO; Saif Affas, MD; Susan Szpunar, PhD; Nancy Mesiha, MD; Louis Saravolatz, MD

Predicting QT Interval Prolongation in Patients Diagnosed with the 2019 Novel Coronavirus Infection

BACKGROUND
2019 Novel Coronavirus (COVID-19) patients frequently develop QT interval prolongation that predisposes them to Torsades de Pointes and sudden cardiac death. Continuous cardiac monitoring has been recommended for any COVID-19 patient with a Tisdale Score of seven or more. This recommendation, however, has not been validated.

METHODS
We included 178 COVID-19 patients admitted to a non-intensive care unit setting of a tertiary academic medical center. A receiver operating characteristics curve was plotted to determine the accuracy of the Tisdale Score to predict QT interval prolongation. Multivariable analysis was performed to identify additional predictors.

RESULTS
The area under the curve of the Tisdale Score was 0.60 (CI 95%, 0.46-0.75). Using the cutoff of seven to stratify COVID-19 patients had a sensitivity of 85.7 % and a specificity of 7.6%. Risk factors independently associated with QT interval prolongation included a history of end-stage renal disease (ESRD) (OR, 6.42; CI 95%, 1.28-32.13), QTc = 450 ms on admission (OR, 5.90; CI 95%, 1.62-21.50), and serum potassium = 3.5 mmol/L during hospitalization (OR, 4.97; CI 95%, 1.51-16.36).

CONCLUSIONS
The Tisdale Score is not a useful tool to stratify hospitalized non-critical COVID-19 patients based on their risks of developing QT interval prolongation. Clinicians should initiate continuous cardiac monitoring for patients who present with a history of ESRD, QTc = 450 ms on admission or serum potassium = 3.5 mmol/L.

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Poster # 15 Category: CQI/EBM

Program: Ascension Providence - Southfield
Program Director: Samira Ahsan, MD, FACP
Presenter: Jacob Alex
Additional Authors: Mathhar Aldaoud, Anudeep Kommineni, Yousef Bader, Evan Hiner, Marcel Zughaib

Syncope: We Might be Over Admitting Low Risk Patients. A Quality Improvement Project

Low-risk syncope accounts for a large proportion of hospital admissions making inpatient investigations often unnecessary. A retrospective chart review of one hundred patients who were admitted with syncope over a period of approximately five months. Applying the San francisco syncope rule, we have stratified those patients into low and high risk categories, patients in the low risk category thought to be appropriate for outpatient evaluation. Additionally, we studied the diagnostic yield of carotid ultrasound in evaluation of syncope. A total of 100 true syncope patients were included in the analysis. The average age of the patients was 59 years (+/- 11). 57 patients out of 100 (57 %) had at least one risk factor and met the criteria for inpatient evaluation; on the other hand 43 patients out of 100 (43 %) did not meet the criteria for inpatient evaluation and thought to be appropriate for outpatient evaluation. 37% (n= 37) of the total number of patients underwent carotid ultrasound, one patient out of the 37 found a viable etiology for syncope on carotid us which translates to 2.7% diagnostic yield. In conclusion, a considerable proportion of syncope patients have benign causes of syncope with no clear indication for admission, developing a standardized approach to risk stratify patients presenting with syncope will potentially help with reducing healthcare cost.

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Poster # 16 Category: Clinical Vignette

Program: Ascension Providence - Southfield
Program Director: Samira Ahsan, MD, FACP
Presenter: Jacob Alex
Additional Authors: Harshil Patel, Roshni Shah, Souheil Saba, Marcel Zughaib

An Unlikely Location for a Vegetation

Infective endocarditis involving the right heart is far less common than the left heart. We present a case of isolated sub-pulmonic valve endocarditis, first reported in literature.

A 30-year-old man with a history of mechanical aortic valve presented to the emergency department with multiple complaints including nausea, vomiting, body aches and fevers. Records revealed he had undergone surgery in his childhood for subaortic stenosis, including revision surgery later in life with a modified Konno procedure. A modified basal short axis view on transthoracic echocardiogram revealed a sub-pulmonic mobile structure consistent with infective endocarditis. Blood cultures grew methicillin sensitive staph aureus within 24 hours and chest CT showed bilateral pneumonia. After treatment with extended intravenous antibiotics, follow-up echocardiogram 4 months later showed no identifiable subpulmonic vegetation.

This case describes a situation where clinicians may suspect infective endocarditis in a typical location such as a mechanical aortic valve. However in patients who develop pneumonia, infective endocarditis of the right heart should be suspected. The pulmonic valve and sub-pulmonic ridge are often difficult to image given their anatomical location, a modified basal short axis view on transthoracic echocardiogram can better image these structures.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 17 Category: Clinical Vignette

Program: Ascension Providence - Southfield
Program Director: Samira Ahsan, MD, FACP
Presenter: Rim Alkawas
Additional Authors: Ammar Ahmad, MD Abbas Chehab, MD

Purpura Fulminans: An Abnormal Early Presentation Associated with Colitis

Introduction/Background

Purpura fulminans is a rare syndrome of widespread microvascular thrombosis. It presents with ecchymotic skin lesions that rapidly progress into hemorrhagic bullae and necrosis. Underlying thrombophilia can be inherited or acquired secondary to bacterial infections, DIC, and/or inflammatory conditions. We present a unique case of an early presentation of purpura fulminans focused in dependent areas and associated with colitis.

Case Description

A 34 year-old male presented with multiple scattered ecchymotic skin lesions and recent history of unprovoked watery bowel movements mixed with mucus and blood. Exam revealed large, well demarcated, non-palpable, dark ecchymotic skin lesions on the back of his head, back and posterior aspect of his thighs bilaterally. Labs were significant for elevated inflammatory markers. Extensive infectious, hematologic, and rheumatologic workup including anti-DsDNA antibodies, lupus anticoagulants, anti-Beta2-glycoprotein, CMV, COVID-19, HIV, neisseria meningitidis, and syphilis were negative. Skin biopsy revealed microthrombi with no vasculitis and negative immunofluorescence study. Colonoscopy was consistent with colitis. He was treated with high dose steroids and IV heparin and discharged on apixaban, mesalamine, and a glucocorticoid-taper.

Conclusion

Purpura fulminans is a rare condition with significant consequences. Diagnosis is based on clinical findings; thorough work-up must exclude conditions with similar presentation. Treatment involves anticoagulation and management of underlying etiology. Superimposed bacterial infections of necrotic skin lesions may occur and eschar formation increases the risk of compartment syndrome. This case is unique in its uncommon association with colitis and presentation of skin findings on dependent areas.

MeSH Keywords: Colitis, Dermatology, Ecchymosis, Purpura Fulminans

ACP Michigan Chapter Scientific Meeting 2021

Poster # 18 Category: Clinical Vignette

Program: Ascension Providence - Southfield
Program Director: Samira Ahsan, MD, FACP
Presenter: Hawra Kamal
Additional Authors: Dania Assad, MD

Incidental Pheochromocytoma: Silent but Deadly

Clinically silent pheochromocytoma are rare tumors, and usually less than small in size (less than 1 cm). We present a case of asymptomatic pheochromocytoma in a 58-year-old man with Ulcerative colitis. He was referred to the endocrinology clinic after finding an adrenal incidentaloma on MRI following a car accident. He denied any history of palpitations, sweating, or hypertension. Additionally, no history of weight gain, muscle weakness or abdominal pain, could be elucidated. The physical exam was unremarkable. Pulse rate was 80 beats/min, and blood pressure was 118/70 mmHg. Investigations for adrenal hormones, including a low-dose dexamethasone suppression test, plasma aldosterone level were within normal limits, however, 24-hour urinary metanephrine and vanillylmandelic acid levels, and plasma c levels were all elevated. CT scan revealed a right adrenal gland measuring 5.8 cm x 4.7 centimeters with areas of necrosis. The patient underwent laparoscopic resection of the tumor.

Along with the dramatic rise in the use of imaging, the frequency of incidentally discovered pheochromocytoma has risen. Asymptomatic pheochromocytomas are usually less than 1 cm in size. Here, our patient had a larger tumor and had elevated levels of metanephrines but still asymptomatic. Though it is a rare tumor, it can have malignant potential with distant metastasis, or even lethal, therefore identification, resection, and treatment is vital. Surgical resection of the tumor is the cornerstone of treatment combined with alpha and beta-blockade perio-op. Given the compelling potential complications of this tumor, including hypertension and cardiac arrhythmia, it is indispensable to learn to diagnose and treat pheochromocytoma. By presenting this case, we hope to raise awareness for properly testing for, and correctly managing clinically silent pheochromocytoma.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 19 Category: Clinical Vignette

Program: Ascension Providence - Southfield
Program Director: Samira Ahsan, MD, FACP
Presenter: Anudeep Kommineni
Additional Authors: Abhiroop Verma, MD

Uncommon Pericardial Disease Resulting From Common Thyroid Disease

Hypothyroidism is a common endocrine disorder with manifestations encompassing all organ systems. One uncommon presentation is pericarditis. Although there is evidence of pericardial inflammation in hypothyroidism, a clear mechanism is not established. The prevalence of pericardial effusion in hypothyroidism is around 3-6% but there is paucity of data on pericarditis. Furthermore, a pericardial effusion can occur in patients who have no active symptoms of hypothyroidism.

A 29-year-old male with a history of hypothyroidism, supraventricular tachycardia, generalized anxiety disorder, and a recent Covid-19 infection presented to the emergency room with a complaint of fatigue and chest pain. He was subsequently evaluated in the emergency, and was found to have a pericardial effusion on CT imaging. His biochemical work-up revealed evidence of elevated inflammatory markers & inadequately controlled hypothyroidism with a TSH of 6.10. A subsequent echocardiography done by the patientâ€™s cardiologist reported a moderate sized pericardial effusion. 10 days later, he presented to the emergency room with worsening symptoms. A repeat echocardiogram showed a large, organized pericardial effusion circumferential to the heart without tamponade physiology. A pericardiocentesis yielded no pericardial fluid due to the fibrinous nature of the effusion. He eventually underwent a pericardial window with pathology suggestive of chronic pericarditis. Fluid analysis was negative for malignant cells, rheumatological etiologies and infectious etiologies, including extensive bacterial, viral, mycobacterial, and fungal studies. He was started on high dose aspirin therapy and his subsequent echocardiograms revealed resolution of the effusion. Fibrinous pericarditis is a rare presentation of hypothyroidism & our case highlights the importance of being cognizant of this clinical sequela of hypothyroidism as it has a potential of degenerating into cardiac tamponade & constrictive pericarditis which may lead to further hemodynamic instability. In addition to infectious & rheumatological etiologies, hypothyroidism should also be kept in the differential for pericarditis.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 20 Category: Clinical Vignette

Program: Ascension Providence - Southfield
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An Unusual Pancytopenia Caused by a Great Imitator

Drug induced lupus (DIL) is an uncommon phenomenon that occurs in approximately 15,000-30,000 individuals a year. Pancytopenia as a result of DIL is even of an anomaly, with very few reported cases.

A 64-year-old female with a medical history of chronic kidney disease (CKD), hypertension, and hyperlipidemia presented to the hospital with a chief complaint of fevers up to 103F and fatigue for approximately 1 week. She denied chills, night sweats or decreased appetite. Laboratory findings revealed pancytopenia with a WBC 0.51k/mcL, platelets 131k/mcL, and Hgb 9.6gm/dL. This constellation of symptoms prompted a workup for malignancy. A peripheral smear showed normocytic normochromic anemia, thrombocytopenia and leukopenia. A bone marrow biopsy was normocellular with adequate trilineage hematopoiesis and few lymphohistiocytic aggregates without any evidence of hematological malignancy. Cytogenetics and flow cytometry were unremarkable. Interestingly, she had a strongly positive Coombsâ€™s test, ANA, and anti-histone antibodies. She had a history of hydralazine use, and at this point DIL was considered in the differential diagnosis. She was initiated on pulse dose steroids then tapered to oral steroids. Her cell counts eventually stabilized; however, her kidney creatinine had increased. A kidney biopsy demonstrated vascular inflammation and glomerular bleeding. This indicated an SLE vasculitis, and she received additional steroids and immunosuppressants.

Drug Induced lupus generally presents with fever, arthralgias, rash, and serositis. The pathophysiology is not yet clear; however, it is suspected that the inhibition of DNA methylation causes increased autoreactivity of CD4+ T cells which result in increased autoantibody production. It is unusual for hydralazine induced lupus to have renal involvement and nearly unheard of it producing pancytopenia. It is critical to recognize that DIL can present with nephritis as well as pancytopenia and to initiate treatment promptly.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 21 Category: Clinical Vignette

Program: Ascension Providence - Southfield
Program Director: Samira Ahsan, MD, FACP
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Wolf-Parkinson-White Syndrome with Concurrent Atrial Fibrillation in an Otherwise Healthy 14 year old Male

Wolf-Parkinson-White Syndrome (WPW) is described as episodes of tachycardia associated with the classic triad of shortened PR interval, widened QRS interval, and a delta wave on electrocardiogram (ECG) due to an anomalous bundle of conducting tissue that bypasses the normal AV conduction system. This can arise anywhere along with AV ring or in the septum. The prevalence of WPW on ECG is estimated at only 0.13-0.25% in the general population. Approximately 18-38% of these patients go on to develop concurrent atrial fibrillation (a-fib), making the prevalence of having both even rarer. The recognition of both WPW and a-fib is important as the misdiagnosis and incorrect treatment can be detrimental to the patient. is Our case represents an episode of WPW with a-fib in a young patient.

A 14-year-old male with no past medical history presented to the emergency department with palpitations. He was afebrile, with stable vitals aside from tachycardia at 194 beats per minute (bpm). Basic lab results and troponin levels were within normal limits. ECG showed a-fib with aberrant conduction at an irregular rate of 178 BPM with a wide, variable QRS (154) and normal QTc (475) with a right bundle branch block. Repeat ECG showed a-fib with ventricular trigeminy and a WPW pattern at an irregular rate of 193 bpm with a wide QRS (148) and a prolonged QTc (660). Valsalva maneuver yielded no change, so patient was given 1mg ibutilide followed by 500mg of procainamide. Repeat EKG showed spontaneous conversion to sinus rhythm with the presence of delta waves. Patient subsequently underwent successful ablation of a left lateral accessory pathway.

Misdiagnosis of WPW and a-fib and treatment with AVN blockers can be deadly as the conduction would be predominately relayed through the accessory pathway, allowing for conduction rates of >500 bmp and result in ventricular fibrillation.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 22 Category: Clinical Vignette

Program: Ascension Providence - Southfield
Program Director: Samira Ahsan, MD, FACP
Presenter: Kunjal Patel
Additional Authors: Hawra Kamal, MD; Alexandra Brdak, DO; Jeremy Heffernan MD

Ashwagandha as a Unique Cause of Thyrotoxicosis Associated with Supraventricular Tachycardia

Introduction: Ashwagandha is a plant derivative of the Solanaceae family. Its extract has been used for centuries in India for stress relief. Thyrotoxicosis following Ashwagandha use is very rare, however, a possible side effect that physicians should be aware of.

Case Presentation: Patient is a 73 year-old female who presented to the hospital with palpitations. She was normotensive with resting tachycardia at 174 beats per minute. EKG revealed supraventricular tachycardia. She was given adenosine and cardizem before converting to sinus rhythm. Labs revealed TSH < 0.01 mcIU/mL. Thyroid exam was unremarkable. Patient did have a history of hypothyroidism for which she stopped taking levothyroxine two years prior. Additional questioning revealed that she began taking Ashwagandha as an alternative to levothyroxine. In addition, she reported symptoms of dizziness, fatigue, irritability, and hair thinning for a few weeks. She denied any alcohol or stimulant use. Further workup showed normal free T4, total T3, thyroid stimulating immunoglobulin and thyroglobulin antibody. Thyroid ultrasound revealed a mildly heterogeneous gland with no discrete nodules. Patient had a negative stress test and echocardiogram with normal systolic function. Her presenting arrhythmia was attributed to thyrotoxicosis from Ashwagandha. She was advised to stop the Ashwagandha tablets. At a follow-up visit two weeks later, the patient was symptom free and TSH normalized.

Discussion: This case illustrates a potential cause of thyrotoxicosis that is reversible and not yet widely described in literature. To our knowledge there are only three cases linking thyrotoxicosis and Ashwagandha. However, the mechanism is not yet understood. Animal studies suggest that Ashwagandha may directly stimulate the thyroid gland leading to increased serum levels of T3 and T4. Additionally, this case emphasizes the importance of obtaining a detailed medication history including herbal supplements, obtaining a complete review of systems, and keeping a broad differential diagnosis.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 23 Category: Clinical Vignette

Program: Beaumont Hospital Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Bana Antonios
Additional Authors: Markie Zimmer, MD; Emma Herrman, MD; Shiva Shrotriya, MD, MPH; Ishmael Jaiyesimi, DO

Very Late Relapse of Hodgkin Lymphoma 18 Years After Remission

A 72-year-old male with a history of protein C and protein S deficiency, factor V Leiden mutation, DVT/PE, and stage IIIB nodular sclerosis Hodgkin lymphoma (diagnosed 18 years back) presented with shortness of breath. EKG showed complete heart block and a transvenous pacemaker was placed. Laboratory studies showed severe normocytic anemia with hemoglobin of 6.2 g/dL, WBC of 2.6 bil/L, platelets of 113 bil/L, and INR of 2.8. The direct antiglobulin test was positive for Anti-IgG and negative for Anti-C3D. LDH was normal and haptoglobin was elevated, contrary to hemolysis. Computed tomographic scan of the abdomen and pelvis showed extensive retroperitoneal lymphadenopathy.

The coagulopathy was corrected by transfusing blood products but patient progressively developed anemia. The bone marrow biopsy was done. It revealed a hypercellular bone marrow with extensive involvement by Hodgkin lymphoma, consistent with disease recurrence after 18 years.

In treated advanced stage Hodgkin lymphoma, 15% to 30% of the patients may experience relapse of the disease. The very late relapse, defined as recurrence of the disease more than 5 years after remission, is uncommon, and has been mostly reported with the nodular sclerosis subtype. In Hodgkinâ€™s lymphoma, remission is expected in most cases but it is important to consider disease relapse in those who develop unexplained severe anemia.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 24 Category: Clinical Vignette

Program: Beaumont Hospital Royal Oak
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Granular Cell Tumor of the Breast: A Breast Malignancy Mimicker

Granular cell tumors are soft tissue neoplasms that can arise from virtually any body site. They are thought to arise from Schwann cells of the peripheral nervous system. The overwhelming majority are benign, with only 1-2% of cases being malignant. Granular cell tumors of the breast can often mimic breast malignancy.

A 62-year-old female with past medical history of hypertension and prior tobacco use had abnormal screening mammography. Family history was positive for breast malignancy in 2 sisters and a maternal first cousin. Prior mammography was unremarkable, aside from one year prior which revealed a concerning 6 mm nodule in the upper outer posterior left breast. Follow up ultrasound was consistent with a benign cyst.

Mammography showed an irregular hypoechoic mass with a surrounding hyperechoic halo in the left breast measuring 10 x 6 x10 mm with internal vascularity. Core needle biopsy revealed a granular cell tumor. Immunohistochemistry was positive for s100 and CD68. The patient underwent a left breast lumpectomy and negative margins were achieved. Her post-operative course was uneventful. She continues to follow with oncology and is arranged for ongoing surveillance.

Granular cell tumors of the breast can present similarly to breast malignancy on physical exam, mammogram, and ultrasound. It is important to include granular cell tumors in the differential diagnosis of a breast mass to prevent unnecessary surgical intervention for what was thought to be a breast malignancy and is later found to be a granular cell tumor. The mainstay of treatment for granular cell tumor of the breast is local resection with confirmed negative margins, which is considered curative.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 25 Category: Clinical Vignette

Program: Beaumont Hospital Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Ujjwal Karki
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Intracardiac Leiomyomatosis Presenting as Syncope

Primary cardiac tumors are rare, with incidence less than 0.1 percent. Secondary tumors are 20 times more common. Tumor thrombus extending to the right heart is commonly seen with renal cell carcinoma. Less common etiologies include intravenous leiomyoma, gynecological malignancies, Wilmâ€™s tumor, hepatoma, and adrenocortical carcinoma.
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46-year-old female with history of uterine fibroid presented with two episodes of syncope, lasting 30 seconds each. Echocardiogram revealed a mobile echogenic mass in right atrium extending from the inferior vena cava (IVC) and moving across the tricuspid valve, causing dynamic obstruction. Cardiac MRI showed the mass originated from the renal vein with similar intra-cardiac extension. Abdominal/Pelvic MRI showed a heterogeneous enhancing mass arising from the fundus of the uterus, and tumor thrombus in the left gonadal vein, extending into left renal vein and through the IVC, into the heart. She underwent exploratory laparotomy with total abdominal hysterectomy/bilateralÂ salpingo-oophorectomy, left gonadal vein resection and tumor thrombectomy with vascular reconstruction, and removal of right atrial and ventricular tumor along with IVC tumor. Pathology of the vena cava revealed tumor thrombus consistent with IntravenousÂ leiomyomatosisÂ (IVL). Uterine pathology consisted of leiomyomata withÂ liomatousÂ differentiation and IVL. Complete resection of the tumor was achieved.
Â
IVL is a rare uterine neoplasm of benign smooth muscle cells, which by extension grows within the intrauterine and extrauterine venous system. Intracardiac leiomyomatosis (ICL) is present in 10 â€“ 30% of IVL. Echocardiography revealing a right-sided cardiac mass without attachment to the endocardium or endothelial surface, originating and freely moving in the IVC without a stalk should raise suspicion for ICL. MRI abdomen/pelvis gives precise information about the tumor location and characteristics, and CT with angiography provides detailed information regarding the path of lesion with tumor extension. Complete surgical resection by a multidisciplinary team is the treatment of choice to prevent recurrence.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 26 Category: Clinical Vignette

Program: Beaumont Hospital Royal Oak
Program Director: Sandor Shoichet, MD, FACP
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Gallstone Ileus Complicating Rectal Cancer: A Red Herring Cause of Abdominal Pain

A 68-year-old male with a history of alcohol abuse presented with a one-week history of fatigue and weakness, and a one-year history of fecal incontinence. On admission, vital signs were stable. Physical exam revealed cachexia, skin pallor, and mild abdominal distention. Fecal occult blood testing was positive. Laboratory analysis was significant for hemoglobin of 6.8g/dL. Of note, computed tomography (CT) scans of his chest, abdomen, and pelvis done months prior for evaluation of anemia and incontinence had shown rectal wall thickening, lung nodules concerning for metastasis, and gallstones. He declined further diagnostic evaluation and was lost to follow up. During current admission for anemia, colonoscopy was performed demonstrating a 15-centimeter rectal mass. Biopsies revealed invasive adenocarcinoma.

On hospital day five, he developed severe abdominal pain, distention, and vomiting. Abdominal X-ray showed signs of small bowel obstruction (SBO). He subsequently had abdominal CT, which revealed pneumobilia and calcified stones at the distal small bowel. Findings were consistent with gallstone ileus. He then underwent urgent exploratory laparotomy with small bowel resection and enterolithotomy of the offending gallstone. Intraoperatively, the surgical team encountered bowel wall erosion and a focal, contained perforation with a small abscess. The collection was cultured, and resulted positive for extended spectrum beta-lactamase (ESBL) producing Klebsiella oxytoca. The patient was started on antibiotic therapy and discharged once stable with plans to follow up for treatment of rectal cancer as an outpatient.

Gallstone ileus is a rare cause of mechanical SBO, occurring in less than one percent of such cases. CT is the gold standard imaging study for diagnosis. Resuscitation and surgical intervention are treatment mainstays.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 27 Category: Clinical Vignette

Program: Beaumont Hospital Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Daniel O'Connor
Additional Authors: Nader Mina, MD; Hira Iftikhar, MD

Synergistic Bleomycin Toxicity and EVALI: A Lethal Combination

Introduction:
Both vaping and bleomycin-based chemotherapy regimens are known risk factors for acute lung injury. Few, if any, cases are documented in the literature of these insults co-occurring.

Case description:
A 20-year-old male was diagnosed with Stage III testicular cancer in Autumn of 2020. He began BEP (bleomycin-etoposide-platinum), of which he completed three cycles before developing pulmonary sequelae. Social history was notable for marijuana use and vaping, including during his active chemotherapy, to help with cancer-related nausea, anxiety, and anorexia.

Winter 2021, he visited the ED for dizziness, fatigue, and diarrhea, felt to be consistent with chemotherapy side effects, but CXR showed subtle bilateral opacities so was discharged on doxycycline. Four days later he felt better and received chemotherapy. Days later, he had pleuritic pain and was admitted for right apical pneumothorax and patchy multifocal airspace disease, infectious work up including BAL was negative so was started on steroids.

Weeks later was readmitted with worsening right pneumothorax, requiring chest tube placement in the ED, and admission to ICU due to progressive hypoxia and worsening lung infiltrates. His ICU course was complicated with left-sided pneumothorax. He was not a candidate for lung biopsy due to inability to tolerate single lung ventilation, not a transplant candidate due to recent malignancy. Progressively declining, hypotensive, with increased oxygen requirements after prolonged course on ventilator, goals of care were addressed with family, and he was compassionately extubated.

Discussion:
Bleomycin was likely the primary driver of pathology in this case but vaping likely has exacerbated pulmonary toxicity leading to the dramatic presentation and tragic end of this case. The patientâ€™s PFT prior to initiation of bleomycin did show a subtle air-trapping process, suggesting bleomycin was not an isolated insult. This case highlights the importance of avoiding additional pulmonary toxins while undergoing treatment with bleomycin.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 28 Category: Clinical Vignette

Program: Beaumont Hospital Royal Oak
Program Director: Sandor Shoichet, MD, FACP
Presenter: Samiksha Pandey
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Massive Pulmonary Embolism after Pfizer Vaccine

Introduction

Vaccines against COVID -19 have been reported to cause venous thromboembolism (VTE). To our knowledge, this is the first case to report the massive, near-fatal Pulmonary Embolism (PE)Â associated with BNT162b2 Covid-19 (Pfizer/BioNTech) vaccine and discuss the associated risk factors for PE.

Case

41-year-old, non-smoker, female on OCP, presented for syncope and seizure-like activity. Upon presentation, she was obtunded and tachypneic. Initial labs showed leukocytosis, mild anemia, and thrombocytopenia, respiratory and metabolic acidosis. She deteriorated quickly to cardiac arrest requiring Cardiopulmonary Resuscitation and intubation. Tissue Plasminogen Activator administered for possible PE. Computed Tomography Angiography (CTA) pulmonary confirmed sagittal pulmonary embolism with near-complete occlusion of the right pulmonary artery causing right heart strain. A pulmonary arteriogram and right pulmonary thrombectomy were performed for residual thrombus. IV Heparin was started, later transitioned to xarelto then, lovenox. Hematological and genetic workup including Paroxysmal Nocturnal Hemoglobinuria, JAK2 V617 mutation, Antiphospholipid panel, Factor V leiden, Prothrombin 620210Q were not detected. She was heterozygous for A1298C but C677T hyperhomocysteinemia (MTHFR) was negative.

Discussion

MTHFR C677T has been associated with increased susceptibility to VTE however, no apparent association is known so far between MTHFR A1298C and VTE. Albeit OCP is a known risk factor for VTE, our patient was on a low OCP dose (0.15 mg desogestrel and 30 mcg of ethinyl estradiol) for 8 years. In this patient, with no strong risk factor for VTE and the proximity of the second dose of Pfizer vaccine, we believe the vaccine itself might have triggered the immunological cascade causing VTE. However, further study is needed for clarity. Therefore, close observation is important post Pfizer vaccine, even for a young female with low-risk factors for VTE.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 29 Category: Clinical Vignette

Program: Central Michigan University
Program Director: Nicholas Haddad, MD, FACP
Presenter: Jaspreet Batth
Additional Authors: Arshdeep Batth, Insija Selene, Sreevastav Teja Kalangi, Jemin Jose

Double Fistula: Streptococcus mitis Culprit for Chest Wall Swelling

Pleuro-cutaneous fistula is an abnormal communication between the pleural cavity and chest wall. The pleuro-cutaneous fistula occurs as a complication of an infectious process, neoplasm, foreign body aspiration, and surgical complication. Amongst infectious etiology, Streptococcus mitis (S. mitis) causing pleuro-cutaneous fistula is very rare. To the best of our knowledge, this is a first reported case of S. mitis causing fistulising disease.

In this case report, we describe a unique case of a heavy alcoholic, 55- year- old male who presented to the emergency department with complaints of painful anterior chest wall swelling, productive cough, and low-grade fever for six weeks. Physical examination was positive for poor dental hygiene and 10 cm fluctuant swelling with overlying erythema and tenderness on the anterior inferior chest wall. CT chest with contrast showed multiple necrotic bilateral lung masses, most prominent in the medial aspect of the left lower lobe measuring 6.6 cm with loculated pleural effusion in the anterolateral left thorax, and suspicious for direct communication to the left anterolateral lower chest wall. Urine Streptococcal antigen, Histoplasma antigen, B-D-glucan, Pneumonia pathogen panel, sputum culture, blood culture, HIV, QuantiFERON-TB were negative. Transthoracic echocardiogram to rule out vegetations was negative. Left thoracotomy and decortication with drainage of empyema, incision and drainage of chest wall abscess were performed, and pleural fluid culture grew S. mitis. Intraoperatively a duodenal hole, communicating pleural cavity through the diaphragm to left chest wall abscess, was found, and repaired through laparotomy. During the hospital stay, the patient continued to be on ampicillin and sulbactam and his symptoms improved significantly.

Pleuro- cutaneous fistula is a rare complication associated with S.mitis infection. The management of these patients includes early detection of the lesion and pathogenic organism, prompt surgical repair and targeted antibiotic therapy. In addition, dental hygiene and pneumococcal vaccine can prevent S. mitis infections.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 30 Category: Clinical Vignette

Program: Central Michigan University
Program Director: Nicholas Haddad, MD, FACP
Presenter: Sreevastav Teja Kalangi
Additional Authors: Sreevastav Kalangi MD, Mona Mahmoud MD, Jaspreet Batth MD, Shweta Kambali MD, Sudhakar Rajeev MD

Grandmother's Love Resulting in Broken Heart Syndrome

Introduction

This is a case of Takotsubo Cardiomyopathy in a 87 year old female after losing her granddaughter complicated by mural thrombus formation with in 3 days of diagnosis.

Case Presentation:

Patient is a 87 year old female with PMH of Hypertension and Dementia presented to ED after an unwitnessed fall and was on floor for 24 hours. On arrival to ED patient was confused oriented only to place. Initial labs showed Troponin of 13.08, CK >6400, Creatinine 1.2. EKG showed sinus tachycardia. Patient was started on heparin infusion and transferred to ICU for management of NSTEMI, AKI, Rhabdomyolysis. 2D TTE was done which showed dilated left ventricle and severely reduced EF 25-30%. Akinesis of apical myocardium. Findings consistent with Takotsubo cardiomyopathy. Patient had previous 2D echo 6 years ago which was normal. Heparin infusion was continued and troponin trending down. Patient had repeat 2D echocardiogram 3 days after admission which showed EF of 20-25%, severe hypokinesis of mid-apicalanteroseptal and apical myocardium and 2.5cm(L)x 0.9cm(W), flat(mural), solid, fixed, apical septal thrombus. Family did not give consent for cardiac catheterization. Patient was managed medically, started on warfarin and was transferred to hospice care

Discussion:

Takotsubo cardiomyopathy is much more common in postmenopausal women and is frequently triggered by unexpected emotional or physical stress.
Although severe systolic dysfunction is observed in most patients, Intraventricular thrombus formation is rare complication. Most of the thrombi diagnosed are during the first two weeks of diagnosis. This emphasizes the follow up echocardiogram at least 2 weeks later.

There are no recommended guidelines on management of mural thrombus. Most cases were treated with warfarin and heparin. Recommended treatment duration is 3months.

The role of prophylactic anticoagulants in TCM and risk factors to predict thrombosis should be examined further as there are no current recommendations

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Poster # 31 Category: Clinical Vignette

Program: Central Michigan University
Program Director: Nicholas Haddad, MD, FACP
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Deception at its Best: An Unusual Presentation of SARS-COVID 19 Infection

Introduction: Extrapulmonary manifestations are common with COVID-19. However, literature reports very few cases of suspected COVID-19 colitis.

Case report: A 50-year-old female with history of hypertension and Gravesâ€™ disease was admitted with complaints of worsening dyspnea and myalgia for one week secondary to a COVID-19 infection. A day later, she developed acute onset, episodic, severe abdominal and rectal pain followed by diarrhea and hematochezia. Family history was positive for Crohnâ€™s disease. Examination revealed stable vitals and diffuse abdominal tenderness. Laboratory investigations revealed leukocytosis, thrombocytosis, elevated CRP(10.5 mg/L), D-dimer(2,417 ng/mL) Calprotectin(1097), whereas ferritin, hemoglobin and electrolytes were unremarkable, ANCA, anti-saccharomyces cerevisiae antibody , C. difficile testing were negative. Stool was positive for occult blood and WBC. CT abdomen-pelvis showed thickening of the sigmoid colon and rectum; superior, inferior mesenteric artery and celiac artery were patent. Further, colonoscopy showed friable ulcers measuring 15-50cms in sigmoid and descending colon sparing the rectum. The biopsy showed active focal mild active inflammation, focal neutrophilic cryptitis and mild hemorrhage within the lamina propria, normal colon mucosal architecture. Granuloma, dysplasia, malignancy were not identified. Thought to be secondary to an infectious etiology, she was treated with broad spectrum antibiotics metronidazole and piperacillin-tazobactam, IV hydration and bowel rest. Other causes such as IBD, ulcerative and ischemic colitis were ruled out based on the location, imaging and pathological evidence. It was concluded that the colitis could likely be caused by COVID-19 infection. The patient gradually improved and was discharged with an outpatient gastroenterology follow-up.

Discussion: The prevalence of SARS-COVID-19 patients presenting with gastrointestinal manifestations is approximately 12%. Case reports detailing colitis secondary to COVID-19 exist; however, they lack pathological evidence. The possible mechanism could be increased expression of ACE-2 receptors in interstitial epithelium leading to colitis. Further studies are warranted to establish the pathophysiological mechanisms leading to COVID-19 colitis.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 32 Category: Clinical Vignette

Program: Central Michigan University
Program Director: Nicholas Haddad, MD, FACP
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ST Segment Elevations in Ventricular Paced Rhythm and Post Cardiac Injury Syndrome after Pacemaker Implantation

Introduction

Post-cardiac injury syndrome (PCIS) are heterogenous autoimmune inflammatory conditions involving pericardium, epicardial and myocardium. Involvement of pericardium can cause pericarditis leading to pericardial effusion. Post pacemaker insertion pericarditis is rare with an estimated incidence of 1 to 2% (1). We present to you a PCIS due to PPM leading to large pericardial effusion with a delayed diagnosis.

Case Presentation

68-year-old gentleman with history of recently implanted permanent pacemaker (PPM) presenting with an atypical chest pain. EKG showed a paced rhythm with ST elevation in leads V2-V3 not meeting Sgarbosa criteria. STEMI alert was called. Cardiac catheterization did not reveal any lesions amenable to stenting. It was not until a significant time after that echocardiogram was done revealing a very large pericardial effusion. Urgent pericardial window was performed to avoid impending tamponade. A history of PPM with elevated ESR/CRP and biopsy results supported a diagnosis of post cardiac injury syndrome leading to pericarditis. Patient was counseled to quit cocaine use and discharged on ibuprofen and colchicine.

Discussion

PCIS leading to pericarditis is a common complication of percutaneous coronary intervention (PCI) and much less commonly pacemaker lead placement. Our case highlights importance of recognition of Sgarbosa criteria in ventricular paced rhythms which often can be misread to STEMI and delay timed diagnosis of conditions such as pericarditis with large effusions and impending tamponade.

Conclusions:

We present you the rare case of PCIS secondary to permanent pacemaker placement. By not following STEMI criteria for ventricular paced rhythms, this led to delayed diagnosis of a large pericardial effusion that may have led to hemodynamic compromise. Earlier and timed identification of PCIS can be successfully treated with NSAIDs, colchicine and steroids to avoid surgical interventions.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 33 Category: Clinical Vignette

Program: DMC Sinai-Grace Hospital
Program Director: Mohamed Siddique, MD, FACP
Presenter: Faiza Ahmed
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Trimethoprim-Sulfamethoxazole - Lighting a Fire in Lupus Nephritis

Introduction:
Systemic lupus erythematosus (SLE) is a chronic autoimmune disease with heterogeneous disease course, characterized by periodic flares, compromised immune system, and susceptibility to infections. At least half of SLE patients have kidney involvement and develop lupus nephritis, which predisposes them to more infections, especially urinary tract infections (UTI). UTI carries a high mortality risk in SLE patients, which prompts immediate treatment with antibiotic. Bactrim (trimethoprim-sulfamethoxazole) is commonly used for UTI, but SLE patients have high allergy prevalence (27.3%) to sulfonamide-containing antibiotics (sulfa drugs) compared to the general population (3%).

Case description:
An 18-year-old African-American female with SLE, Class III focal lupus nephritis and Class V membranous lupus nephritis on kidney biopsy, came to ED with complaints of back pain, right flank pain, dysuria, and increased urinary frequency. Patient was noncompliant with medication regimen of hydroxychloroquine and mycophenolate mofetil. She was prescribed a course of Bactrim and asked to follow-up with her PCP. Four days later, she presented again to ED with complaints of sharp chest pain worsening with deep inspiration, along with joint pains in bilateral wrists, elbows, and left ankle. On admission, she had fever (38.6Â°F) with tachycardia, and complained of fatigue and weakness. Lab studies were remarkable for reduced WBC (3.8x103/mL) and hemoglobin (8.7g/dL); elevated serum creatinine 1.04 (baseline=0.5); elevated ANA titer 1:1280; low C3 and C4 counts (56 and 9, respectively). Urinalysis showed moderate amounts of blood and protein.

Conclusion:
SLE flare with existent lupus nephritis predisposes patients to end-stage renal disease, and to increased morbidity or death. Bactrimâ€™s propensity towards exacerbating nephritis should warn physicians against its use in SLE patients with potential susceptibility to sulfa drugs. This patient, with her Class III & V lupus nephritis and noncompliance to treatment, was already at a risk for worsening disease and Bactrim only hastened the process.

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Poster # 34 Category: Clinical Vignette

Program: DMC Sinai-Grace Hospital
Program Director: Mohamed Siddique, MD, FACP
Presenter: Ali Al Sbihi
Additional Authors: Nouraldeen Manasrah, MD; Dahlia Sano, MD; Sarah Lonardo, MD

Early-stage Burkitt Lymphoma Remained in Remission 7 Years From Diagnosis After Only One Cycle of Chemoimmunotherapy

Background:
Burkitt Lymphoma (BL) is a rare, mature, fast-growing, and aggressive B-cell neoplasm. It is a type of Non-Hodgkin's Lymphoma (NHL) which has a high proliferation rate with distinctive genetic changes in the C-MYC oncogene. It can rarely occur in adults in its sporadic form; approximately 1% of adult NHL in the United States.

Case Presentation:
A 63-year-old African American male presented with a painless mass in the right submandibular region. Physical examination showed 1-1.5 cm firm lymphadenopathy in the right submandibular, cervical, and supraclavicular regions. Biopsy of the mass showed dense atypical large lymphoid cells with a background of focal areas of starry sky appearance. Immunohistochemistry was BCL-6 and PAX5 positive and BCL-2 negative. FISH was positive for C-MYC translocation of chromosomes 8:14 suggestive of BL. PET-CT showed active lymphadenopathy in the right cervical, submandibular, and supraclavicular regions. The patient decided not to pursue therapy, but he followed up three months later due to mass enlargement. Repeat PET-CT showed increasing abnormalities in the abovementioned regions with 2 new abnormal cervical LNs. He was admitted and received part A of the hyperCVAD chemotherapy regimen. He also received rituximab and intrathecal prophylactic methotrexate before chemotherapy. Afterward, he de cided to decline therapy due to concerns about side effects. After a year, repeat PET-CT showed near complete resolution of the lymphadenopathy. The patient had again chosen not to get further treatment based on the imaging findings and he lost follow-up for four years. On his most recent follow-up, his lymphoma continued to completely be in remission.

Discussion:
For BL, a minimum of three cycles of high-intensity chemotherapy regimens combined with rituximab have shown success in the treatment, with high complete remission rate and overall survival in majority of adult cases. If left untreated or partially treated, BL can be fatal.

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Poster # 35 Category: Clinical Vignette

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Gross Hematuria in an Elderly Smoker Male Due to Eosinophilic Cystitis

Introduction

Eosinophilic cystitis (EC) was first described by Brown and Palubinskas in 1960. This inflammation is characterized by transmural involvement of the bladder predominantly with eosinophils. It fairly affects adult men and women. EC is associated with numerous factors, such as allergy, bladder tumor, bladder trauma, parasitic infections, and chemotherapeutic agents with no clear cause for it.

Case Presentation

A 71-year-old male with a history of 25-pack year smoking who recently quit was admitted with gross hematuria for four days. He also had mild dysuria. Medications included aspirin. BP: 159/66 mmHg, HR: 78 beats/minute, RR: 17 breaths/minute, SpO2: 96%, and temperature: 36.6 Celsius. Physical examination revealed normal genitalia with no ecchymosis or signs of trauma. Hemoglobin was 8.4 g/dl, WBC was 7300 cells/mm3, absolute eosinophil count was 0.2 cell/mm3, it was up to 700-800 cell/mm3 in the last three months. Urinalysis showed cloudy red urine, RBC >100 cell/HPF, WBC <5 cell/HPF, 3+ blood, 2+ protein, and 2+ bacteria. KUB was normal. Abdominopelvic CT with contrast showed diffuse nodular thickening of the bladder wall with multiple polypoid projections into the lumen. Urology performed cystoscopy, clot evacuation, bladder biopsy fulguration, and bilateral retrograde pyelogram. Ceftriaxone was given for five days. Urine started to gradually clear up. Interestingly, bladder biopsy showed acute phase eosinophilic cystitis in the posterior and right lateral walls with prominent submucosal hemorrhage in the right and left lateral walls, it was negative for malignancy. The hospital course was uncomplicated. The patient continued close outpatient follow-up with no gross or microscopic hematuria recurrence.

Conclusion

EC is a rare inflammatory condition that mimics other urological conditions. A biopsy is the gold standard diagnostic test. It is best managed by a combination of oral medical therapy and surgical intervention. Although most patients are cured, recurrence is common, so follow up is mandatory.

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Poster # 36 Category: Clinical Vignette

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Metastatic Neuroendocrine Carcinoma of Breast Origin

Introduction: Breast cancer is the most common cancer in females, with invasive ductal carcinoma being the most common histologic type. Breast cancer can sometimes have neuroendocrine features on pathologic examination and may present as metastatic neuroendocrine carcinomas. Identifying the source is imperative in guiding treatment strategies and can affect the overall prognosis.

Case Description: An 82 year- old woman presented with severe back pain for 5 days after a fall, for which she was attributed to lower extremity weakness. Patient denied any fever, weight loss, breast pain, masses or nipple discharge. She also denied any numbness, urinary or fecal incontinence. History was negative for cancer. Other Comorbidities included HTN and DM. Physical exam was significant for thoracic spine tenderness and lower extremity weakness with spasticity. Workup showed hypercalcemia and multiple diffuse osseous lytic lesions with T3 cord compression on CT scan .Differential diagnosis included multiple myeloma or bony metastasis of unknown primary. Biopsy with Histologic examination of T3 lesion showed a neuroendocrine carcinoma (Positive synaptophysin and chromogranin) . Other immunohistochemical stains including GATA-3, Mammoglobin and ER/PR were positive which favored a malignancy of breast origin. Subsequent Bilateral Breast Mammogram and U/S revealed a breast mass measuring 0.9 x 0.6 x 1.2 cm that was confirmed to be hormonal receptor positive/ HER2 negative invasive ductal carcinoma with neuroendocrine differentiation on biopsy. After neurosurgical stabilization, the patient was started on hormonal therapy which resulted in significant improvement.

Conclusion: Identifying the primary source of metastatic neuroendocrine carcinoma is very important for prognostication and to guide therapy options. Hormone receptor positive breast cancer with neuroendocrine features has a good prognosis and responds very well to hormonal therapy.

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Poster # 37 Category: Clinical Vignette

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Recurrent Arterial Thrombosis Related to Severe Iron Deficiency Anemia: A Rare Entity

Introduction

Iron deficiency is predominantly the leading cause of anemia worldwide; when it is severe, it can predispose patients to thrombocytosis leading to a hypercoagulable state and eventually resulting in venous thromboembolism. However, it is rare to have iron-deficiency anemia causing thrombocytosis and leading to arterial thrombosis.

Case Description

A 37-year-old woman with fibroid uterus and iron deficiency anemia presented to our hospital with left upper quadrant abdominal pain and tenderness on examination. CT-abdomen showed a hypodense wedge-shaped area in the spleen representing a splenic infarct. However, assuming that this was an incidental isolated finding, the patient got discharged after getting treated for a UTI. She presented again one year later with right-sided abdominal pain radiating to the back. This time, CT-abdomen showed thrombus along the abdominal aorta wall projecting into the lumen and wedge-shaped hypodensities in the right kidney representing right renal infarction. During this presentation, the patient had severe anemia with hemoglobin <4g/dL and platelets >1000/mcL. JAK2 gene mutation analysis was negative, so myeloproliferative neoplasm was ruled out. As per the hematology recommendation, the patient started aspirin and iron tablets. Later, she followed up regularly with a hematologist in the outpatient clinic and experienced gradual improvement in hemoglobin and platelets. No new thrombosis or thromboembolic events occurred so far.

Discussion

Arterial thrombosis usually develops secondary to a ruptured atherosclerotic plaque; however, in rare cases and with the absence of atherosclerosis, arterial thrombosis can be induced by severe iron deficiency anemia-related thrombocytosis. Since patients with severe iron deficiency anemia are at increased thrombotic risk, therefore, correcting iron deficiency anemia with iron replacement therapy can reverse thrombocytosis and prevent catastrophic thromboembolic events and complications.

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Poster # 38 Category: Clinical Vignette

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Hemoptsis in Third Trimester- Sole Manifestation of Stage IV Gestational Choriocarcinoma

Introduction:
Gestational choriocarcinoma originates from hydatidiform mole, normal pregnancy or abortion. Herein, we present a case of FIGO stage 4 choriocarcinoma presenting solely with hemoptysis in last trimester of pregnancy that resulted into delivery of a healthy baby.

Case Presentation:
A 22-year-old female, pregnant at 36 weeks was admitted for hemoptysis for 10 days. She denied fever, shortness of breath, weight loss, night sweats, rash, joint pain. Physical exam revealed tachypnea, tachycardia, bilateral lower lung base crackles and decreased breath sounds. Labs were unremarkable. She was started on empiric antibiotics for possible pneumonia on CT thorax. CT PE was negative for pulmonary embolism. She underwent C-section at 37 weeks 2 days due to ongoing dyspnea and delivered a healthy baby. Placental pathology was normal at this time. However, she continued to have hemoptysis with visible blood clots. All infectious and rheumatologic tests were negative. Bronchoalveolar lavage confirmed diffuse alveolar hemorrhage. Repeat CT thorax showed in numerable bilateral pulmonary masses. Lung biopsy showed findings of metastatic choriocarcinoma, fibrotic pleura with mesothelial hyperplasia, keratins. MRI Brain/stem-showed leptomeningeal metastasis. CT abdomen/pelvis w/contrast confirmed Liver, spleen and pulmonary metastasis. Beta-hCG 20,713 and HCG tumor marker 23,209. She was diagnosed to have FIGO stage IV choriocarcinoma, WHO score 13 [Antecedent Pgx (2) + HCG (2) + site of metastases (4) + number of metastases (4), size (1)]. She was started on chemotherapyâ€“ EMA-EP (etoposide, cisplatin, Actinomycin-D) with intrathecal methotrexate. She tolerated the first chemo dose well and did not have any further episodes hemoptysis.

Discussion:
Choriocarcinoma is a clinical diagnosis. Significant elevations in beta-hCG, and clinical and radiological evidence of distant metastasis supports the diagnosis of choriocarcinoma. Chemotherapy is the treatment of choice for choriocarcinoma due to its chemo-sensitive nature.

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Poster # 39 Category: Clinical Vignette

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A Diagnostic Dilemma: Seronegative or Catastrophic APS?

Introduction:
Catastrophic APS (CAPS) is a rare variant of the antiphospholipid syndrome (APS), characterized by thrombosis in multiple organs and a cytokine storm, with histopathologic evidence of multiple microthromboses, and high serum aPL (antiphospholipid) titers.
Seronegative APS (SN-APS) is characterized by recurrent thrombosis without cardiovascular risk factors, and absence of an identifiable cause of thrombosis, suggestive of a thrombophilic condition, such as APS, but persistent negativity of aPL titres on at least two occasions. We present a unique case that highlights the diagnostic challenge due to overlap between these conditions.

Case presentation:
An 18year-old African-American-female presents with new onset seizures, quadriplegia, aphasia, and right eye blindness. Labs revealed positive antibodies for ANA, Anti-Sm Ab, Anti-DsDNA, low complements, and negative B2 glycoprotein, Anti-Cardiolipin, Lupus Anticoagulant. MRI/MRA/MRV showed CNS hemorrhages, attenuated vessels of Circle of Willis with beaded appearance, partially occlusive thrombosis of straight sinus. Fundoscopic exam showed Central retinal artery occlusion, Central retinal vein occlusion, bilateral retinal vasculitis. She received pulse steroids, cyclophosphamide, IVIG, and Rituximab for possible Lupus induced CNS vasculitis. After initial improvement, she became tachycardic and hypoxic. Physical examination showed Anisocoria, R pupil sluggish to light, hyperpigmented discoid appearance of bilateral auricles, 1/5 strength in both upper and lower extremity. Labs revealed pancytopenia. CT-PE showed bilateral pulmonary emboli. Venous duplex revealed deep vein thrombosis in right common femoral vein. She was again treated with IV pulse steroids followed by oral steroids and plasmapheresis. Anticoagulation was held due to CNS findings. SN-APS was considered due to APS seronegativity, thrombocytopenia, and renal involvement. She showed clinical improvement with increase in C3 and C4 levels after adding cyclophosphamide.

Summary:
SN-APS is usually a controversial diagnosis of exclusion. Anti-thrombin Ab, Anti-vimentin Ab, Anti-Annexin Ab, PSPTG (phosphatidylserine/prothrombin antibody IgG, serum) are few newer antibodies to be tested when suspicion of SN-APS is high.

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Poster # 40 Category: Clinical Vignette

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Xanthogranulomatous Pyelonephritis: Not Just One but Two!

Introduction:
Xanthogranulomatous pyelonephritis (XPN) is a rare condition that results in destructive chronic inflammation of the kidneys, where granulomatous tissue with lipid-laden macrophages replaces normal renal parenchyma. It often occurs in the setting of staghorn calculi and is rare. Bilateral XPN is even rarer.

Case Description:
A 65-year-old African-American male was referred for admission by his PCP because of abnormally low hemoglobin (6.6g/dL). Physical exam showed diffuse abdominal discomfort and distention. Labs showed microcytic anemia, acute renal injury (Creatinine: 4.67mg/dL), elevated AST (49U/L), and CRP (>160mg/L). Urinalysis showed pyuria, and urine culture grew Proteus mirabilis. Renal ultrasound revealed bilateral polycystic kidneys with parenchymal thickening and staghorn calculi, as confirmed later by CT-abdomen. Renal calyces were dilated with a multiloculated appearance ("Bear Paw's Sign"). Staghorn calculi, enlarged polycystic kidneys, and worsening kidney functions warranted bilateral XPN diagnosis. Bilateral nephrostomy tubes were placed to drain the calyces. CT-Abdomen/pelvis one-week later showed persistent bilateral XPN; a fistula between the abscess and the proximal transverse colon was also observed. Right nephrectomy was performed, and the histopathological study confirmed the presence of lipid-laden macrophages. Left nephrectomy deferred per patient.

Discussion:
XPN affects less than 1% of chronic pyelonephritis cases. It is a predominantly unilateral disease, which makes this bilateral case even rarer. It is often associated with chronic suppurative infection from staghorn calculi. Concomitant infections with E. coli, Proteus mirabilis, or Enterococcus faecalis are common. Presenting symptoms are non-specific: flank pain, fever, and weight loss. Laboratory evaluation may show anemia, elevated CRP, abnormal liver function, and renal failure. Radiologic imaging may depict more specific findings, such as the Bear's Paw Sign that needs to be confirmed with histopathological study for the presence of lipid-laden macrophages. Curative treatment in this patient is bilateral nephrectomy and subsequent life-long hemodialysis.

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Poster # 41 Category: Clinical Vignette

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NUT Carcinoma - A Fusion Mutation Leading to a Devastating Diagnosis

Introduction:
NUT carcinoma (NC) is a rare malignancy and is often associated with a poor prognosis (median survival of a few months). It results from a translocation mutation involving the nuclear protein of the testis (NUT) in chromosome 19 and bromodomain and extra-terminal protein (BET) genes which results in the oncogene BET-NUTM1. We present a case of NC in a female patient.

Case description:
A 36-year-old woman, with a minimal smoking history, presented to the emergency department with a 4-day history of dyspnea, cough with scant sputum production, and pleuritic chest pain. Imaging revealed an 8.5 cm X 6.9 cm heterogeneous mass spanning the right upper and middle lobes, and a large right-sided pleural effusion. Ultrasound-guided thoracentesis was performed, and the pleural fluid was positive for malignant cells, consistent with squamous cell carcinoma. Positive-emission tomography further revealed pleural thickening of the right hemithorax and right hilar and mediastinal lymphadenopathy. Biopsies were obtained from the right perihilar mass through bronchoscopy. She was started on carboplatin, nab-paclitaxel, and pembrolizumab for Stage IVA non-small cell lung cancer. Comprehensive solid tumor gene fusion panel showed BRD3-NUTM1 fusion mutation [t(9:15)], and she was diagnosed with metastatic NC. Given the mixed response to the initial regimen, gemcitabine was started, but the tumor continued to progress. Plans for a trial with a bromodomain inhibitor was aborted when the patient developed pulmonary emboli. The patient gradually declined, and approximately eight months after her initial diagnosis, she passed away.

Discussion:
NC is a rapidly progressing carcinoma that may occur anywhere in the midline. The diagnosis can be difficult as it relies on genetic sequencing and not histology. Bromodomain-containing protein 4 (BRD4)-NUTM1[t(15:19)] is the most implicated mutation and BRD3-NUTM1, as described here, is rarer. Largely treatment-resistant, recent focus has been on targeted therapies, like BET inhibitors and histone deacetylase inhibitors.

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Poster # 42 Category: Clinical Vignette

Program: Henry Ford Allegiance Health
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Presenter: Ciji Robinson
Additional Authors: Radhika Sheth, MD, Vivek Kak, MD

A Case of Vernet and Gradenigo's Syndrome from Otitis Media

Introduction: Acute otitis media is well known to develop complications from spread through the vascular channels and lymphatic drainage. Gradenigo's syndrome is a rare complication of otitis media by which the infection extends into the petrous temporal bone. This causes compression of CN V and VI within the Dorello canal. It is characterized by the classic triad of lateral rectus palsy, otitis media and pain in the distribution of the trigeminal nerve. Vernet syndrome involves compression of cranial nerves IX, X and XI as they pass through the jugular foramen. Pseudomonas, S. aureus, and S. pneumoniae are commonly implicated in this infection, however compression from cholesteatomas, malignancies, and even autoimmune conditions is not uncommon.

Case Description: A 39-year-old female presented with pain in her left ear and on the left side of her face. She was also unable to abduct her left eye, and had progressive dysphagia as well as weakness associated with abduction of her left shoulder. The patient was diagnosed with a sinus infection 3 weeks prior to presentation and was prescribed amoxicillin without relief. On physical exam, she was afebrile with severe left sided facial tenderness and a left CN VI palsy. Magnetic resonance imaging (MRI) showed opacification of the left mastoid cells, enhancement of the medial and medial-inferior aspect of the left middle cranial fossa, T1 marrow replacement, edema with enhancement of the left side of the skull base surrounding the left cavernous sinus. The patient was diagnosed with Gradenigo's syndrome and was started on ceftriaxone.

Discussion: Computed tomography of the temporal bone should be done early and MRI can also be used. Gradenigo's and Vernet syndrome are rare conditions secondary to otitis media. Patients will generally require long-term intravenous antibiotic treatment, and early surgical intervention should be considered for patients who do not improve with antibiotics alone.

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Poster # 43 Category: Research

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Clinical Predictors of Hospital-Acquired Bloodstream Infections

Background
Hospital-acquired bloodstream infections (HABSI) are associated with increased mortality and decreased hospital quality metrics. This has led to an increased focus on blood culture stewardship. Little data exists regarding predictive factors of bacteremia in hospitalized patients. We aim to determine what clinical characteristics in patients were predictive of HABSI.

Methods
This is a retrospective case-control study of 540 patients with positive blood cultures admitted to our health system between September 1, 2017, to April 1, 2020. Electronic medical records of patients with positive blood cultures were independently reviewed to determine contamination versus true bacteremia. We looked at different clinical parameters and laboratory investigations within 24 hours of drawing blood cultures. Clinical variables were age â‰¥ 60 years, heart rate â‰¥ 90/minute, systolic blood pressure â‰¤ 90 mmHg or use of a vasopressor, oral temperature > 38Â°Celsius (100.4Â°Fahrenheit), white blood cells (WBC) count â‰¥12,000 / ÂµL, lymphocytes â‰¤ 1000/mm3, platelets < 150,000 /ÂµL, and creatinine >2.0 mg/dL. Stepwise logistic regression analysis was used for predictive statistical model development.

Results
In a cohort of 481 patients with hospital-acquired bacteremia, 350 cases had true bacteremia and 131 cases were contaminated blood cultures. Stepwise regression analysis showed that white blood cell (WBC) count â‰¥ 12,000 cells/ÂµL, lymphocyte count â‰¤ 1000/mm3, creatinine > 2.0 mg/dL, and oral temperature > 38Â°Celsius (100.4Â°Fahrenheit) were associated with HABSI (R-square= 0.06, p value= 0.002).

Conclusion
Our findings suggest that WBC count, lymphocyte count, creatinine, and oral temperature together can be used to develop appropriate blood culture stewardship models in the inpatient setting. This may help minimize unnecessary blood cultures.

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Poster # 44 Category: Clinical Vignette

Program: Hurley Medical Center
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Progressive Dysphagia Secondary to Cervical Osteophytes

INTRODUCTION

Cervical osteophytes are common among the elderly population and patients usually remain asymptomatic. In rare cases, large osteophytes can cause external mechanical obstruction of the esophagus leading to dysphagia with all its complications. Symptoms can be easily reversed with appropriate and prompt surgical intervention.

CASE PRESENTATION

An 86-year-old male with a past medical history of hypertension presented to the hospital with progressive loss of weight for the last two years. He had difficulty swallowing and excessive saliva production resulting in cough, no pain with swallowing . His appetite declined tremendously; he lost about 45 lb during this time. On the physical exam he was not in acute distress, hemodynamically stable and afebrile, but was frail and cachectic. Gastroenterology and interventional radiology attempted to insert a nasogastric tube on multiple occasions, but were unsuccessful. Further imaging revealed large anterior cervical osteophytes at C4-C5, C5-C6 2.1 cm from the anterior vertebra causing his esophageal obstruction and subsequent difficulty in swallowing. Neurosurgery proceeded with osteophytectomy of C4, C5 and C6. Post-surgery patient underwent an extensive rehabilitation program where he worked with speech and language therapists, he had significant improvement in his dysphagia and started to gain weight gradually.

DISCUSSION

As anterior cervical osteophytes externally compressing on the esophagus can be one of the treatable causes of dysphagia, physicians should have a low threshold for imaging to confirm the diagnosis in the appropriate clinical circumstance. Our patient had chronically progressive symptoms with a history of surgeries to his lumbar spines before. Furthermore, neurologic and muscular etiologies were ruled out. Early diagnosis and surgical intervention can completely resolve the dysphagia, and patients can have better clinical outcomes.

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Poster # 45 Category: Clinical Vignette

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Cerebral Amyloid Angiopathy and Progressive Dementia

INTRODUCTION

Cerebral amyloid angiopathy (CAA) is commonly found in the elderly population. It involves deposition of amyloid-beta protein within small to medium sized vasculature and can consequently present with multiple neurological symptoms including dementia. MRI of the brain can show asymptomatic microhemorrhages which are highly specific for the disease, but confirmatory diagnosis is via brain biopsy. We present a case of progressive dementia in a patient later confirmed to have CAA.

CASE PRESENTATION

An 80 year old Caucasian female with non-contributory past medical history presented with progressive amnesia for 6 months and altered mental status, hallucination and agitation for 1 week. She denied any headache, weakness, numbness, tingling or any other significant symptoms. At baseline the patient was living alone and able to perform her ADLs without help.

On physical exam she was hemodynamically stable and was negative for any localizing neurological signs and her lab work including CSF analysis showed elevated proteins, Albumin and IgG index with negative cultures and the rest of the workup was unremarkable.

MRI of the brain demonstrated multifocal chronic microbleeds which was highly suggestive of CAA. Moreover a brain biopsy, further confirmed the diagnosis.

She was managed with immunosuppressive therapy with oral steroids and Mycophenolate mofetil and she showed partial improvement.

DISCUSSION

Cerebral amyloid angiopathy involves beta-peptide protein deposition within the cerebral vessels, commonly leading to vascular rupture and intracerebral hemorrhage. Acute/subacute cognitive decline is not an uncommon manifestation of CAA it can be accompanied by confusion, personality changes and hallucinations which were present in our patient, early intervention with immunosuppression may help reversing the course of the disease, our patient who had confirmatory work up by brain MRI showing microbleed and positive brain biopsy did show some encouraging outcomes with steroids and mycophenolate.

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Poster # 46 Category: Clinical Vignette

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Common Symptomatology, Unrelated Etiology - Two Rare Cases of Acquired Angioedema

Introduction

Two main etiological mechanisms cause angioedema, hereditary (HAE) and acquired (AAE). HAE is more common than AAE. Both are associated with C1-esterase inhibitor (C1INH) which is involved in regulating the classical complement pathway, and in inhibition of kallikrein-bradykinin pathway. When C1INH inhibits this pathway, it blocks bradykinin formation which subsequently prevents vasodilation and vascular permeability. While HAE is due to lack or dysfunction of C1INH, AAE is due to increased consumption of the C1INH which is usually secondary to autoimmune disorders or malignancy. AAE due to deficiency of C1 esterase inhibitor (C1INH-AAE) is a rare cause of recurrent angioedema.

Case Presentation

We report two cases of rare AAE. First is a 59-year-old female with a three year history of recurrent oro-facial angioedema and multiple hospital visits. Her medical conditions included Sjogrenâ€™s syndrome and lupus anticoagulant defect. Second is a 74-year-old obese male who also presented with oro-facial angioedema and hospitalized for the same. He reported recent weight loss and medical history of hypertension. He was found to have a lung mass. Laboratory results of both patients showed reduced function of C1INH, reduced levels of C1INH protein, complement components C1q and C4C.

Discussion

Although from different etiologies, both patientsâ€™ were diagnosed with C1INH-AAE. Patientsâ€™ age at presentation and clinical features were consistent with other case reports. Approximately half of the patients with AAE are reported to have upper airway obstruction from edema during angioedema episodes. Upper airway edema can potentially lead to significant mortality and morbidity.

Conclusion

Precise incidence of AAE is unknown largely due to the rarity of this condition which may be contributing to misdiagnosis and/or delay in diagnosis. Prompt recognition of angioedema episodes and appropriate treatment with C-1 esterase inhibitor replacement, or kallikrein inhibitor or bradykinin 2 receptor antagonist, can be life saving in AAE patients.

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Poster # 47 Category: Clinical Vignette

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Penile Implant Infection with Actinomyces

INTRODUCTION

For men suffering with erectile dysfunction, penile implant prosthesis has the highest rate of satisfaction when compared to pharmacologic therapy. Infection poses the most serious complication, occurring in 3% of cases, often necessitating urgent removal and prompt antibiotic therapy. Incidence of infection further increases with penile implant revision. The most commonly found organism is Staphylococcus epidermidis, part of the normal skin flora. Herein we present a unique case of penile implant infection with Actinomyces species, which are commonly found in the oral cavity.

CASE PRESENTATION

A 66-year-old male with medical history of type 2 diabetes mellitus, hypertension, end-stage renal disease on peritoneal dialysis, and erectile dysfunction status post penile implant insertion status post exchange presents with generalized weakness and erosion of his penile implant through the skin. The penile implant was exchanged 6 years prior. Moreover, he denied dysuria, urgency, urinary frequency and reported adequate urination through his prosthesis. He was hemodynamically stable, afebrile, and showed no leukocytosis. Computed tomography (CT) of the pelvis revealed penile cellulitis with multifocal deep soft tissue air but was negative for abscess. Urology performed penile prosthesis removal, circumcision and partial excision of the glans. Tissue cultures were sent and came back positive for Actinomyces turicensis. He was subsequently started on broad spectrum antibiotics; vancomycin, cefepime and metronidazole. As per infectious disease recommendations, these eventually downgraded to amoxicillin/clavulanate postoperatively.

DISCUSSION

Actinomyces species are very rare causes of penile implant infections and are not usually found in the genitourinary system but the oral cavity. The primary risk factor for such infections are individuals that participate in oral sex. After verifying such infections, the astute clinician should involve the patient in education on safe oral sex measures despite sensitivity of the topic. These discussions are crucial in patients who undergo penile implant insertion procedures.

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Poster # 48 Category: Clinical Vignette

Program: Hurley Medical Center
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Familial Hypokalemic Periodic Paralysis Presenting with Multiple Cardiac Arrests

INTRODUCTION

Familial hypokalemic periodic paralysis (FHPP) is rare disorder of striated muscle involving autosomal dominant mutations of calcium (CACNA1S) or sodium ion channels (SCN4A), resulting in potassium influx and aberrant myocyte depolarizations. Affected individuals develop episodic painless flaccid paralysis precipitated by hypokalemia, either spontaneously or triggered by carbohydrate-rich meals, stress, alcohol, cold, exercise or medications. FHPP associated conduction abnormalities have been reported, however cardiac arrest is exceptionally uncommon. We present a case of FHPP with multiple cardiac arrests associated with severe hypokalemia.

CASE PRESENTATION

We present a 38 year old Caucasian male with strong family history of FHPP. Starting from age 12, he typically experiences four-five episodes of paralysis monthly, lasting 45-90 minutes, triggered by exercise or high-carbohydrate diet, with complete recovery and return to baseline following the episode.

En-route to the emergency department (ED), he developed ventricular fibrillation (Vf) cardiac arrest requiring three rounds of defibrillation and epinephrine with return of spontaneous circulation. While in ED, he had generalized paralysis but developed another Vf cardiac arrest with ROSC after defibrillation. Laboratory results showed hypokalemia of 1.7mmol/L. Electrocardiography (EKG) revealed prolonged QT interval. Potassium was aggressively supplemented. Despite replacement, patient developed multiple Vf episodes requiring over 20 cycles of defibrillation. Between episodes he was awake and oriented. Initially started on amiodarone, medication was changed to Lidocaine infusion. Eventually Vf episodes terminated. Repeat potassium after last episode was 5.4mmol/L.

Following recovery, he was maintained on potassium supplements and spironolactone. At one week follow-up, repeat potassium was 4.6mmol/L, without further episodes of paralysis.

DISCUSSION

Periodic paralysis (PP) classified into hypokalemic, hyperkalemic, thyrotoxic, and Andersen syndrome represent a rare group of disorders. FHPP is especially unique; our case represents the second cardiac arrest in the literature. As a medical emergency, rapid diagnosis and treatment is crucial.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 49 Category: Clinical Vignette

Program: Huron Valley-Sinai Hospital
Program Director: Jeet Pillay, MD, FACP
Presenter: Jeffery Lei
Additional Authors: Dr. Michelene Liebman

Double Trouble: A Case of Gastrointestinal Stromal Tumor and Urothelial Carcinoma

Gastrointestinal Stromal Tumors (GISTs) are mesenchymal tumors first described in 1983 by Mazur and Clark. GISTs are rare, comprising less than 1% of all GI tumors, with approximately 5,000 new cases per year in the US. Due to the low incidence, it is often overlooked that patients with GISTs are at a higher risk (up to 20%) of developing secondary malignancies.

The case presented is a 64-year old male with complaints of abdominal discomfort with eating and left lower quadrant pain. Computed tomography scan revealed a large mass with intrinsic necrosis within the mesentery. Laparoscopy and biopsy confirmed diagnosis of low-grade GIST. Caris testing revealed a mutation in exon 11, with likely susceptibility to imatinib and sunitinib. The mass involved the 2nd through 4th parts of the duodenum and largely extended into the mesentery of the retroperitoneum and down towards the aorta. The lesion was fixed to the large vessels, prohibiting safe resection. He was started on neo-adjuvant therapy with imatinib, but eventually switched to sunitinib. Months later, a follow-up CT scan led to discovery of a new area of tissue abnormality in the urinary bladder. He underwent a cystoscopy with transuretheral resection of bladder tumor (TURBT) which showed multifocal bladder tumors. Initially these were thought to be metastases from the GIST, however, biopsies revealed high-grade non-invasive urothelial carcinoma. He was subsequently started on Bacillus Calmette-Guerin intravescical immunotherapy.

While patients with multiple primary tumors are extremely rare, incidence of patients with secondary primary tumors is increasing. This case provides more evidence that GISTs carry increased risk for developing a second primary tumor. Physicians should be aware that multiple tumors in a patient with a GIST may not be metastases but completely separate malignancies and treatment regimens could require optimization to best treat both types of cancers while minimizing toxicity.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 50 Category: Clinical Vignette

Program: Huron Valley-Sinai Hospital
Program Director: Jeet Pillay, MD, FACP
Presenter: Joseph Owens
Additional Authors: Dr. Feras Aloka, Dr. Lawrence Macdonald, Dr. Mark Karabajakian, Dr. Eric Snowden, Dr Katie Sword, Dr. Narod Kalaydjian

Intracardiac Thrombi: Right Atrium and Right Ventricle Thrombi

1. Introduction

RA and RV thrombi are uncommon, related with concomitant pulmonary emboli, and associated with considerable mortality.

2. Case Presentation

Our patient was an 80-year-old Caucasian male with a history of PD and CKD presenting to the ED after having a couple episodes of witnessed near-syncope. In the ED the patient denied any CP, SOB, LOC, but did have an occasional dry cough.

Admitted to telemetry, an echocardiogram showed a serpiginous mobile mass in the RA and RV. Setting in motion an urgent cardiac catheterization performed with ultrasound-guided access to the RFV, inferior vena cavogram, bilateral pulmonary angiograms, and extirpation of matter/thrombectomy in the right atrium, right main pulmonary artery, and right intermediate lobar artery. A heparin drip was started and he was sent to the ICU. Subsequently he was started om Eliquis.

3. Discussion

RV thrombus is seen in 4.5% of PE patients with an echocardiogram. 98% of right heart thrombi patients have a concurrent PE. Treated right heart thrombus mortality is 45%, and 100% if left untreated. PE alone is a 2.5% risk of mortality. Risk stratification: Type A has the highest risk of mortality. It resembles a serpiginous snake, thin and freely mobile, originating from a peripheral vein. Type B thrombi originate in situ, are immobile, with PE 40% of the time and are rarely fatal. They result from an MI with ventricular thrombus formation, and A-fib right atrial appendage thrombi formation. Type C: rare, mobile and are similar in appearance to a myxoma.

4. Conclusion

An 80-year-old male with episodes of near-syncope. He came in without chest pain and shortness of breath but had a type A right heart thrombus in the right atrium and ventricle. He received anticoagulation and a thrombectomy.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 51 Category: Clinical Vignette

Program: Huron Valley-Sinai Hospital
Program Director: Jeet Pillay, MD, FACP
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Partners in Crime: The Hypothesis for Synergistic Relationship Between Acute Cytomegalovirus Infection and Concurrent Ocular Syphilis

The ocular manifestations of syphilis infection may mimic any number of infections including cytomegalovirus (CMV) retinitis, autoimmune uveitis, optic neuritis, etc. (Koundanya and Tripathy, 2021). The manifestation of ocular syphilis may occur at any time during infection and is commonly associated with neurosyphilis (CDC, 2016). Currently the United States of America is in the midst of a syphilis and specifically ocular syphilis epidemic. In 2018, the Center for Disease Control (CDC) reported the highest incidence of syphilis cases since 1991 with a 71.4% increase in new primary and secondary infections reported since 2014 (CDC, 2018). As the incidence grows healthcare practitioners must be more vigilant about identifying and screening at-risk patients. Co-infection with viruses including human immunodeficiency virus (HIV) and CMV have been well-reported, due to association with similar at-risk behaviorsâ€”potentially a synergistic association. The existence of viral shedding of CMV in the semen has been associated with increased acquisition of syphilis infection. This association is reportedly secondary to CMV downregulation of monocyte chemoattractant protein-1 (MCP-1) levels that is important for cell-mediated clearance of treponemal infection: thereby increasing risk of syphilis acquisition. (Gianella et al., 2015). The relationship of CMV to syphilis is usually reported in the setting of congenital infection and its effect on perinatal mortality. However, the case presented here details an acute infection of CMV in the setting of latent syphilis that subsequently evolved into ocular syphilis with neurosyphilis. Interestingly this finding explores a dual hypothesis that acute infection with CMV increases incidence of new syphilis infection and may augment existing disease to enhance or hasten progression of neurological symptoms. In addition, this case should bear further review as to its unique presentation in a young heterosexual male with the onset of B-like symptoms that prompted the investigation and identification of concurrent CMV and neurosyphilis infection.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 52 Category: Clinical Vignette

Program: Huron Valley-Sinai Hospital
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A Rare Case of Colorectal Primary Signet Ring Cell Carcinoma in an Otherwise Healthy 24 year old

Signet-ring cell carcinoma (SRCC) is a rare tumor that occurs most commonly in the stomach. Primary signet-ring cell of the colon and rectum (PSRCCR) is exceedingly rare with an incidence of less than 1%. If identified, PSRCCR has a poor prognosis due to its vague and often late presentation of symptoms. Although there is limited data on PSRCCR, a retrospective study showed that it tends to occur in younger adults and carries a median survival of 33 months after diagnosis.

A seemingly healthy 24-year-old male with no significant past medical history presented to the hospital for complaints of progressive abdominal pain, anorexia, weight loss and intermittent non bloody, non-bilious emesis for approximately 2 monthsâ€™ time. The patient initially reported symptoms of abdominal discomfort that started 5 months prior to presentation. He attempted dietary modification to manage his symptoms without success. His symptoms continued to progressively worsen and he noticed changes in his bowel habits including looser stools, nausea and transient, mod-severe (7/10), R-sided abdominal pain that he described as feeling like "severe bloating and gas".

On presentation, initial labs were grossly unremarkable but a CT abdomen showed evidence of a partial bowel obstruction in the transverse colon as well as multiple enlarged mesenteric lymph nodes concerning for malignancy. The patient was admitted to the hospital and underwent a colonoscopy with biopsy of the lesion responsible for the partial SBO. The pathology returned as poorly differentiated signet-ring cell carcinoma. The patient subsequently underwent an exploratory laparotomy with ultimate right hemicolectomy and resection of the 8x7cm tumor and multiple mesenteric lymph nodes.

This case highlights the need for additional research and case reports to be done on signet-ring cell carcinoma.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 53 Category: CQI/EBM

Program: McLaren Macomb Hospital
Program Director: Christopher Provenzano, MD, Member
Presenter: Hima Doppalapudi
Additional Authors: George Fakhouri, DO; Tara Eastin, DO; Joshua Gibson, MD; Grace Brannan, PhD

Awareness of Hepatitis C Screening Per Current Guidelines in the Primary Care Resident Clinic at McLaren Macomb

Historically, hepatitis C virus (HCV) infection was found to have the highest prevalence in individuals born between 1945 and 1965. Hence, the CDC and US Preventive Services Task Force (USPSTF) recommended Hepatitis C screening in patients born between 1945 and 1965. However, as of March 2, 2020, and April 9, 2020, the USPSTF and CDC, respectively, recommended screening all adolescents and adults aged 18 to 79 for Hepatitis C to eliminate Hepatitis C nationally. These screening updates were implemented to identify earlier stages of infection, thereby, receiving therapy before the development of complications.

Before the new 2020 guidelines, our experience with Hepatitis C screening at the residency clinic has been relatively poor. This quality improvement project aimed to determine attendings and residents' level of awareness and implementation of current recommended hepatitis C guidelines in the internal medicine and family medicine resident clinics at McLaren Macomb before and after an educational intervention.
A de-identified survey was administered to attendings and residents before and after an educational intervention. A paired t-test (SPSS Version 25) was performed to compare the change in mean rate of patients screened while a Chi-square test was performed to compare screening patterns and awareness before and after the intervention. Statistical significance was set at $p<0.05$.
With our intervention, we found an increase in the percentage of providers screening for HCV of up to 31.4% ($p= 0.01$) and successfully increased awareness to 97.3% ($p< 0.000$). The mean rate of patients screened increased by 17.35% post-test ($p<.000$).

ACP Michigan Chapter Scientific Meeting 2021

Poster # 54 Category: Clinical Vignette

Program: McLaren Macomb Hospital
Program Director: Christopher Provenzano, MD, Member
Presenter: Atheer Hussain-Amin
Additional Authors: Akarsh Parekh, MD, George I. Fakhouri, DO, and Salman Fateh, DO

A Rare Case of Systemic Lupus Erythematosus Ppresenting as Evan's Syndrome

Evan's syndrome (ES) is a rare autoimmune disorder characterized by the simultaneous or sequential development of autoimmune hemolytic anemia (AIHA) and immune thrombocytopenia (ITP) and/or immune neutropenia in the absence of any underlying cause. Evans syndrome has been found to be associated with collagen vascular disease, especially systemic lupus erythematosus (SLE).

A 45-year-old male presented to the hospital with progressive dyspnea for one week, fatigue, hemoptysis, hematemesis, and rash. The patientâ€™s medical history includes DVT, pulmonary embolism, and type II diabetes, no surgical history, no known allergies, and he does not use Tobacco, alcohol, or any Illicit drugs. On the day of admission, he noticed petechial rash on his legs and had an episode of hemoptysis and hematemesis. His CBC had platelets of 1,000 cells/microliter and hemoglobin of 4.6 g/dL. His serum was positive for anti-nuclear antibody, double stranded DNA, anti-platelet antibody, anti-ribonucleotide antibodies, Coombs indirect antibodies, and 3+ positive Direct Antiglobulin Testing. He had a low C3 and C4 complement levels, low haptoglobin, high IgA and IgG. He received numerous units of packed RBC and platelet transfusions, but his platelet count would transiently increase. Treatment with high dose steroids and IVIg stabilized the patient. His course was complicated with the presence of mild stable bilateral subarachnoid hemorrhage. Patient was discharged and on outpatient basis was started on Rituximab which improved the platelet count. Patient later devolved polyarthralgia consistent with SLE. Our patient's initial presentation of SLE was ES which is an exceedingly rare presentation of SLE.

This case demonstrates rituximab has shown to help with treatment of refractory Evans syndrome by depleting abnormal clone-producing autoantibodies. Although anemia and thrombocytopenia are common features of SLE, ES seems to be a rare manifestation in SLE. Early recognition and treatment can reduce the morbidity and mortality associated with this immunologic conundrum.

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Poster # 55 Category: Clinical Vignette

Program: McLaren Regional Medical Center/MSU
Program Director: Parul Sud, MBBS. FACP
Presenter: Shravya Balmuri
Additional Authors: Nasheed Shams MD, Arvind Kunadi MD

IgA Nephropathy with Uncommon Association

Introduction:
IgA Glomerulonephritis is one of the most common causes of primary glomerulonephritis in the world's developed countries. Interestingly healthy individuals have around 3 to 16 percent of mesangial IgA deposition but would not present with any clinical manifestations. Moreover, IgA nephropathy can be asymptomatic with proteinuria, hypertension, and frank/microscopic hematuria. This type of presentation has more occurrence in adults. Though Immunoglobulin A (IgA)-dominant infection-related glomerulonephritis associated with Staphylococcal infection is well documented in the literature, its association with other organisms is not well studied. We present a rare case of IgA glomerulonephritis presented in association with E. Coli.

Case:
We present a case of biopsy-proven IgA-dominant IRGN in an elderly, non-diabetic female with a preceding Escherichia Coli urinary tract infection. Our patient is a 78-year-old Caucasian female with PMH of CHF and CKD Stage III with baseline creatinine 2mg/dl. She initially received in-hospital broad-spectrum antibiotics for her E.Coli infection UTI. Three weeks later, she returned with acute kidney injury / dark urine/flank pain, and worsened kidney function. Pertinent lab findings included Serum Creatinine 6.74 mg/dl and low serum complement levels (C4-7.3 mg/dl, C3-57.5 mg/dl). A kidney biopsy showed proliferative IgA and C3-deposits. she was treated with steroids, but her condition worsened. She developed fluid overload and oliguria with no improvement in kidney function. She was then initiated on hemodialysis.

Conclusion:
E. Coli has been identified in prior literature as an underlying cause of IgA-dominant IRGN but is rare compared to Staphylococcal infection. While elderly diabetic males are most commonly affected, our case highlights that females and non-diabetics are also at risk for this disease, especially if there is already an underlying history of CKD. Closer monitoring and early intervention with immunosuppressive and non-immunosuppressive intervention could prevent the progression of patients to overt renal failure.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 56 Category: Clinical Vignette

Program: McLaren Regional Medical Center/MSU
Program Director: Parul Sud, MBBS. FACP
Presenter: Amman Yousaf
Additional Authors: Shoaib Muhammad, Syed Intekhab Alam

Primary Sternal and Sternoclavicular Joint Tuberculosis

Tuberculosis (TB) remains a significant public health dilemma across the globe, especially in underdeveloped countries. It most commonly involves the lungs; however, cases of extrapulmonary TB involving the urogenital tract, gastrointestinal tract, vertebral bodies, and meninges are not uncommon. Tuberculous osteomyelitis of the sternum is rare, and only a few cases are reported in the literature. We present a 46-year-old female who presented with anterior chest wall swelling with purulent discharge for six months. She also had a low-grade fever and a weight loss of 10 kilograms over six months. Ultrasound was suggestive of a collection in the sternum extending into the right sternoclavicular joint. The fluid TB QuantiFERON was positive for acid-fast-bacilli and radiology findings confirmed to be the sternum's primary tuberculous osteomyelitis. The patient was sensitive to first-line antituberculous medications and the bony lesions resolved after the treatment with no unwanted sequelae. This case highlights the rare primary extrapulmonary presentation of tuberculosis. Radiological modalities like Ultrasound and CT scans with clinical history can help raise the possibility of the disease, while the biopsy is mandatory for confirming the diagnosis. Treatment starts with medication similar to pulmonary TB management, and surgical intervention is reserved only for cases with extensive bony destruction.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 57 Category: Clinical Vignette

Program: Mercy Health Grand Rapids
Program Director: Bryan Hull, MD, FACP
Presenter: Byoungchul Kim
Additional Authors: Vincent Ngo MD, Jeffrey Henneman MD, Michael Meyers MD, Kasim Qureshi MD, Christopher Glisson MD, Ryan Burmeister MD

Unpleasant Surprise: Primary Extrapulmonary Small Cell Carcinoma Found in the Small Bowel with Paraneoplastic Syndrome

Extrapulmonary small cell carcinoma (ECSS) is rare, only constituting 2.5%-5.0% of all small cell carcinoma and 0.1-0.4% of all cancers. There are only about 1000 new cases diagnosed each year in the United States. ECSS involving the gastrointestinal tract is even rarer. Consequently, no clear standard treatment has been established. To make matters worse, ECSS is often considered after other diseases are worked up, which increases the risk of metastasis, and the overall survival of ECSS is poor, with 5-year survival rates around 13%. A 53-year-old female with a pertinent past medical history of GERD presented with hematemesis and was found to have a duodenal ulcer with successful treatment with PPI. A few months later she developed new neurologic symptoms including diplopia, numbness in non-dermatomal distributions, seizures, confusion, and shortness of breath on exertion. EEG was unremarkable, and EMG suggested inflammatory neuropathy. An autoimmune workup was positive for anti-GAD-65 and ANNA-1 antibodies, and the patient was started on IVIG. During an IVIG session, the patient began to have respiratory distress, likely due to neuromuscular weakness, requiring BiPAP for a few days. Due to her neurologic symptoms, respiratory distress, and the presence of anti-GAD-65 and ANNA-1 antibodies, underlying malignancy was suspected, and the PET scan was done which showed increased uptake in the duodenal region. Biopsy from EGD showed poorly differentiated neuroendocrine carcinoma with positive synaptophysin and strong positivity of Ki-67, consistent with ESCC. Whipple procedure was initially considered, but due to her respiratory distress, she was started on platinum-based chemotherapy instead of the surgery.

This case shows the importance of including ECSS as a differential diagnosis for patients suspected of having paraneoplastic encephalomyelitis. Early diagnosis and prompt treatment will increase the chance of survival of the patient.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 58 Category: Clinical Vignette

Program: Mercy Health Grand Rapids
Program Director: Bryan Hull, MD, FACP
Presenter: Tayyab Shabbir
Additional Authors: Rija Binte Rehan Alvi, MD ; Ryan Burmeister, MD

Confused and Constipated: A Surprising Case of Profound Uremia Secondary to Severe Constipation

Toxic Metabolic Encephalopathy is commonly associated with infections, electrolyte abnormalities, and polypharmacy in geriatric populations. An uncommon cause is uremia which mainly presents in CKD patients. A 79 yo bedbound lady, without history of nephropathy, was brought by family with complaint of altered mental status for 1 week. Patient had become increasingly lethargic and confused, also had constipation. Vitals and exam were normal. Her labwork revealed a low hemoglobin 6.3; creatinine of 2.9, a BUN of 154, elevated from 0.6 and 19 respectively; normal urinalysis. Family reported a bruise on her back, which raised suspicion for retroperitoneal bleed. CT abdomen and pelvis was pursued which surprisingly revealed a large rectal stool ball, 10.4x9.6x13.6 cm. Bladder was extremely distended as a result of outlet obstruction with associated bilateral hydronephrosis.

A Foley catheter was inserted, with an immediate output of 1925 mL. Patient was given suppositories and enema which resulted in 6-8 bowel movements, leading to complete normalization of her creatinine and BUN. Within 2 days, patient became alert and oriented x4. Family refused further workup regarding anemia and left AMA.

It is rare to see such profound symptomatic azotemia, secondary to a benign reversible cause, like constipation. Literature review did not reveal any studies on this phenomenon. A case series of 146 patients with post-renal uremia did not reveal any gastrointestinal pathology as the cause. Although we couldn't rule out malignancy in our patient's case, her wheelchair bound status was a big risk factor for developing constipation, which proved to be debilitating in her case. Though severe azotemia can be an urgent indication for dialysis, in our patient's case a simple intervention of catheter insertion resolved her symptoms. More attention should therefore be paid to constipation as a debilitating pathology which is ignored much too often in inpatient units.

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Poster # 59 Category: Clinical Vignette

Program: Michigan State University
Program Director: Supratik Rayamajhi, MD, FACP
Presenter: Keerthi Gullapalli
Additional Authors: Venumadhavi Gogineni, Si Yuan Khor, Priyal Agarwal, Osama Mosalem, Mahmoud Abdelsamia

New Onset Type 1 Diabetes Mellitus in a Patient with Esophageal Carcinoma on Pembrolizumab

Introduction: Immune check point inhibitors like Pembrolizumab act by targeting the programmed cell death-1 (PD-1) receptor. While they are widely used in many cancers, they are also associated with immune related adverse events (irAE) such as type 1 diabetes mellitus with serious risk for diabetic ketoacidosis (DKA)

Case presentation: A 74-year-old male with past medical history of esophageal cancer on pembrolizumab and no previous history of diabetes presented with altered mental status, tachycardia and tachypnea three days after receiving his third cycle of immunotherapy. On examination, he had dry mucous membranes and generalized abdominal tenderness. Labs were significant for hyperglycemia with severe anion gap metabolic acidosis and positive serum ketones consistent with diabetic ketoacidosis (DKA). He was fluid resuscitated and started on insulin infusion. Work up for type 1 diabetes mellitus (DM) revealed elevated zinc transporter 8 antibody, GAD-65 antibody, and low C-peptide levels. He was diagnosed with fulminant type 1 DM secondary to pembrolizumab. Pembrolizumab was resumed after resolution of his DKA.

Discussion: Type 1 DM is a rare irAE seen in 0.1-0.2 % of patients on PD-1 inhibitors. A possible mechanism is due to destruction of beta islet cells of pancreas by host T cells which are no longer inhibited due to effects of PD-1 therapy. Fulminant type 1 diabetes is a novel subtype of type 1 DM characterized by abrupt onset of hyperglycemia with ketoacidosis . In a literature review, 66% of patients presenting with type 1 DM after pembrolizumab presented with DKA. To date there is no consensus for treatment of fulminant type 1 DM caused by immune check point inhibitors other than insulin therapy. Pembrolizumab can be continued once better glycemic control is achieved. For our patient, resuming therapy with pembrolizumab did not worsen glycemic control.

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Poster # 60 Category: Clinical Vignette

Program: Michigan State University
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Presenter: Si Yuan Khor
Additional Authors: Akhil Sharma, Enhua Wang, Keerthi Gullapalli, Venumadhavi Gogineni, Abdul-Fatawu Osman, Nazia Khan

A Case of Deceitful Culprit for Pseudo-Hyperthyroidism

Introduction:
Biotin also known as Vitamin B7 is widely available over the counter as hair, skin and nail supplements. With the increased use of over-the-counter supplements, biotin interference with common laboratory immunoassays has been increasingly recognized. Hereby, we report a case of Biotin-Induced Pseudo-Hyperthyroidism.

Case Presentation:
82-year-old female presented with sudden onset persistent palpitations for a day. Upon presentation, vital signs were stable other than tachycardia with heart rate of 161 bpm. EKG revealed atrial fibrillation with rapid ventricular response. Initial laboratory findings showed normal CBC, CMP, electrolytes and unremarkable urine drug screen. The patient was started on Diltiazem drip and Heparin drip, atrial fibrillation was subsequently rate controlled. Further workup later revealed low TSH 0.97 ÂµIU/mL, elevated free T4 1.59 ng/dL, elevated free T3 2.2 pg/mL; initial diagnosis of hyperthyroidism was made. However, further history revealed that the patient has been taking Biotin 10 mg daily for the past 2 years. She was advised to stop taking Biotin temporarily. Repeated thyroid function tests (TFTs) 48 hours after discontinuation of biotin showed TSH 2.56 ÂµIU/mL, free T4 1.48 ng/dL. Repeated tests 72 hours later showed normalization of TFT. Thyroid Anti-microsomal antibody, Thyrotropin receptor antibody, Thyroid stimulating immunoglobulin and Anti-Thyroglobulin antibody were negative. A diagnosis revision was made and the patient was diagnosed with Biotin-induced Pseudo-Hyperthyroidism.

Discussion:
Our patient would have been misdiagnosed as True Hyperthyroidism, potentially leading to the treatment of hyperthyroidism which can cause great harm. It is essential to take a detailed medication and supplement history given an increasing use of over-the-counter supplements. Clinicians should enquire about any ingestion of biotin-containing supplements before ordering TFTs and when interpreting results. Ideally, biotin should be discontinued for at least 48-72 hours before checking TFTs.

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Poster # 61 Category: Clinical Vignette

Program: Michigan State University
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Fatal Recurrent Biventricular Takotsubo Cardiomyopathy

Background

Takotsubo cardiomyopathy (TCM) is characterized by ventricular wall motion abnormalities most commonly in the form of left ventricular (LV) apical ballooning. Although less frequent, other variants of left ventricular TCM are not uncommon. Nonetheless, concurrent right ventricular involvement is rarely reported and can easily be overlooked. We present a unique case of recurrent biventricular TCM with a drastic outcome.

Case Summary

A 63-year-old female presented in March 2020 with nausea, vomiting and abdominal pain. She rapidly progressed to respiratory failure requiring intubation. Electrocardiogram demonstrated sinus tachycardia and < 1 mm of inferolateral ST segment elevation. Troponin I and BNP levels were elevated. Chest CTA demonstrated pulmonary edema and small nonocclusive segmental pulmonary emboli. A 2-D echocardiogram (ECHO) findings suggested biventricular TCM with LV ejection fraction (LVEF) of 20%. With aggressive medical therapy, she subsequently improved and went home on carvedilol, lisinopril, atorvastatin, and apixaban. After 7 weeks, regadenoson-Technetium 99-m myocardial perfusion study demonstrated normal perfusion and function. Nine weeks post-hospitalization, ECHO demonstrated complete resolution of the biventricular wall motion abnormalities with LVEF of 60%. In October 2020, the patient presented again with recurrent symptoms. She was hypotensive and developed respiratory failure requiring intubation and vasopressors. ECHO was consistent with biventricular TCM recurrence with severe biventricular dysfunction. Despite aggressive medical therapy, multiorgan failure developed. As her condition continued to deteriorate, her family requested comfort care only. The patient died shortly after withdrawing life support.

Conclusion

Patients presenting with TCM, right ventricular involvement need to be carefully looked for. Early recognition can help anticipate complications and necessitate closer monitoring and special management considerations. Spreading awareness among providers on the frontier is essential. Incidence and impact of recurrence of biventricular TCM are yet to be determined. Further research is needed to help understand the underlying pathophysiology and discover therapy targets and treatments.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 62 Category: Research

Program: Michigan State University
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Transcatheter Versus Surgical Aortic Valve Replacement in Low Risk Patients with Severe Aortic Valve Stenosis: A Meta-Analysis

The current guidelines for severe symptomatic aortic stenosis state that high surgical risk patients have a class IA indication for transcatheter aortic valve replacement TAVR and intermediate risk patients have a class IIa indication. However, there are guidelines for low risk patients. Recently, the trials comparing TAVR versus surgical (SAVR) in low risk patients have published updated data with longer follow-up duration. Thus, we conducted a meta-analysis to determine the long-term risk profile of TAVR versus SAVR in these patients. Statistical analysis was conducted using Review Manager 5.4. A total of 3668 patients were included with a median-weighted follow-up period of 2.09 years. In regards to the primary outcome, all-cause mortality was similar in both arms (TAVR 9.3% vs SAVR 9.7%, p=0.97). Myocardial infarction was also similar in the two arms (TAVR 2.4% vs SAVR 2.1%, p=0.59). Stroke was insignificantly lower in the TAVR arm (TAVR 5.0% vs SAVR 6.2%, p=0.12). Furthermore, new onset atrial fibrillation (odds ratio (OR) 0.17, 95% confidence interval (CI) 0.13-0.21, p<0.00001, I2=0%), new primary pacemaker implantation (OR 3.25, 95% CI 1.27-8.33, p=0.01, I2=89%), and major bleeding (OR 0.35, 95% CI 0.18-0.66, p=0.001) significantly favored the TAVR arm. In conclusion, this updated meta-analysis illustrated that in the long-term setting patients with TAVR have an insignificantly higher risk of all-cause mortality and myocardial infarction. Moreover, new onset atrial fibrillation, new primary pacemaker implantation, and major bleeding were shown to significantly favor the TAVR patients. Further trials with long-term follow-up duration are required to confirm these results before TAVR should be deemed appropriate for patients with severe aortic stenosis and a low surgical risk.

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Poster # 63 Category: Clinical Vignette

Program: Michigan State University
Program Director: Supratik Rayamajhi, MD, FACP
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Not All That Ground Glass is COVID-19 – A Case of Diagnosis and Treatment of E-cigarettes or Vaping Associated Lung Injury (EVAL

Introduction:
E-cigarettes have been known to cause heterogenous forms of lung injury, termed e-cigarettes or vaping associated lung injury (EVALI). EVALI and COVID-19 present similarly with respiratory distress, imaging showing diffuse, multifocal, bilateral ground-glass opacities, and lab findings suggestive of inflammation. As COVID-19 cases trend down, vaping device use continues to be prominent. Diagnosis of EVALI requires a high index of suspicion, especially in older patients as 76% of cases occur in those younger than 35. Accurate diagnosis is necessary for appropriate treatment as management and complications can differ markedly from those of COVID-19.

Case description:
46-year-old female with a past medical history of hypertension, and type II diabetes, presented to the emergency department with chief complaint of shortness of breath. On presentation she was tachycardic, tachypneic, and hypoxic to 87% on room air requiring 15L intermediate nasal canula. Examination revealed bilateral coarse crackles. Initial labs showed pH 7.45, PCO2 31, PO2 62, CRP 21.9, sed rate 79. CTA chest showed extensive bilateral lung infiltrates, no evidence of pulmonary embolism. She was started on empiric CAP coverage and given 1 dose of dexamethasone for presumed COVID-19. She was tested on 3 occasions for COVID-19 due to high clinical suspicion but was negative. Cardiac, autoimmune and infectious work-up was negative. On further questioning, patient reported starting nicotine based vape approximately 1 month prior. She was started on Solumedrol 0.5mg/kg per 24hrs, resulting in improvement of her symptoms. She was discharged to home on 2L supplemental oxygen, and 3-week steroid taper.

Discussion:
Although EVALI and COVID-19 present similarly, their management and complications can differ markedly. Diagnosis and treatment of EVALI may be delayed due to bias towards attributing respiratory distress to COVID-19. Management of this disease continues to evolve as vaping devices technology itself continues to change.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 64 Category: Clinical Vignette

Program: Michigan State University
Program Director: Supratik Rayamajhi, MD
Presenter: Enhua Wang
Additional Authors: Si Yuan Khor, MD; Akhil Sharma, DO; Supratik Rayamajhi, MD

Microscopic Polyangiitis, an Antineutrophil Cytoplasmic Autoantibody (ANCA)-Associated Vasculitis Involved Kidney and Lung

Introduction:
ANCA-associated vasculitis is a group of necrotizing vasculitis, affected predominantly small-sized arteries, and have similar features on kidney histology. Microscopic polyangiitis is one of necrotizing vasculitis that commonly manifesting as necrotizing glomerulonephritis and/or pulmonary capillaries.

Case:
A 68-year-old male with the past medical history of hypertension, CKD stage 3, microalbuminuria, presented to the emergency department due to abnormal laboratory tests. The patient endorsed generalized fatigue, exertional dyspnea, and decreased appetite for 3 weeks. On presentation, vital signs stable, physical examination HEENT unremarkable, lungs clear, no skin rash, neurologic exam unremarkable. laboratory showed Creatinine 4.44 mg/dL, BUN 46 mg/dL, ANA titer > 1: 2560, serum Myeloperoxidase antibody > 8, serum Proteinase 3 antibody 1. Anti-dsDNA antibody and Anti-GBM IgG antibody negative. Serum Protein Electrophoresis (SPEP) showed a hypoproteinemic pattern. Renal Ultrasound showed no abnormalities. CT high-resolution chest without contrast demonstrated moderate multilobar patchy ground-glass opacities, mosaic attenuation compatible with air trapping. On day 2, Right kidney biopsy performed, high-dose (â€œpulseâ€) Methylprednisone 500 mg daily for 3 days started. On day 5, he had one-time episode of hemoptysis; Started plasmapheresis due to suspect Pulmonary Alveolar Hemorrhage; Started oral prednisone 80 mg daily. On day 9, renal biopsy confirmed pauci-immune crescentic glomerulonephritis; the Patient started Induction therapy with Rituximab and Prednisone. On day 19, the patient discharged to home, scheduled routine hemodialysis three-time weekly. The patient regained his kidney function after 5 months of hemodialysis.

Discussion:
Performing the renal biopsy and starting treatment as early as possible are essential if suspect ANCA vasculitis. Kidney biopsy is a common method for definitive diagnosis. Induction regimen for organ-threatening diseases (eg, active glomerulonephritis, pulmonary hemorrhage) consists of Glucocorticoids in combination with Rituximab instead of monotherapy. Plasmapheresis would be added to the regimen if the patient develops pulmonary hemorrhage while waiting for the kidney biopsy result.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 65 Category: Clinical Vignette

Program: Spectrum Health MSU
Program Director: Talawnda Bragg, MD, FACP
Presenter: Tyler Bonkowski
Additional Authors: Ravi Velagapudi MD, Joseph Pitcher MD

Caught in the Act: A Clot in Transit

Background: Paradoxical embolus is a feared complication of atrial septal defect (ASD). In the setting of elevated right-sided heart pressures and venous thrombosis, this risk is substantially increased.

Case: A 45-year-old male with a history of obstructive sleep apnea and obesity presented with progressive chest tightness and exertional shortness of breath for 1 week duration. On arrival he was found to be hypoxic requiring 4 L of oxygen and tachycardic with normal blood pressures. CT angiogram of his thorax revealed a large saddle pulmonary embolus extending into the lobar and segmental branches with evidence of right heart strain. Further workup revealed elevated high sensitivity troponins and N- terminal pro brain nitrate peptide, electrocardiogram revealed S1QT3 pattern (deep S-wave in lead I and Q-wave with inverted T-wave in lead III) suggestive of right heart strain.

Decision Making: He was started on a heparin infusion and underwent mechanical thrombectomy (MT) without complication. Post MT transthoracic echocardiogram revealed elevated right ventricular pressures and an ASD with a 4.6 cm clot-in-transit from the right atrium into left atrium. Transesophageal echocardiogram was performed the next day to better evaluate the ASD, however intracardiac thrombus was not identified. There was no change in the patient's neurovascular assessment. With concern of systemic embolism, pan-CT angiogram was done which revealed a right popliteal arterial thrombus. Hemodynamic significance of his popliteal occlusion was confirmed on right ankle-brachial index measurements and he underwent mechanical thrombectomy. Given his high clot burden an inferior vena cava filter was placed and he was discharged on warfarin.

Discussion: Disappearance of a clot in transit on sequential serial imaging should raise suspicion for systemic embolization. This case demonstrates the timely detection and intervention of a popliteal artery embolism originating from the venous circulation.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 66 Category: Clinical Vignette

Program: Spectrum Health MSU
Program Director: Talawnda Bragg, MD, FACP
Presenter: Bradley Clemens
Additional Authors: Joshua Owuor MD, Shahid Mohammed MD

Myxedema Coma Complicated by Severe Anemia

Introduction: Myxedema coma is a rare endocrine emergency with a high mortality rate. It can present a diagnostic challenge as features frequently overlap with many other conditions. Unfortunately, due to its increasing rarity, the diagnosis can be delayed unless there is a high index of suspicion.

Case Report: We present a case of a 69-year-old female who was brought to the emergency room after being found down on her cough covered in feces and bedbugs. She reported that had been suffering from progressively worsening fatigue, shortness of breath, and lightheadedness. She had a past medical history of primary hypothyroidism previously on levothyroxine and hypertension but had since been lost to follow-up several years prior. On presentation she was hypothermic, hypotensive, and disoriented with myxomatous features (brittle sparse hair, lateral thinning of the eyebrows, doughy periorbital edema). She was not responsive to fluid administration and admitted to the ICU for shock. She had a profound anemia with a hemoglobin of 2.3. Further workup revealed she had a right peroneal DVT with bilateral pulmonary emboli, and a TSH of 32.8 with low free T3 and T4. She was started on intravenous levothyroxine and liothyronine for myxedema coma with subsequent resolution of her symptoms. After further investigation did not reveal a source of bleeding, her anemia was primarily attributed to severe hypothyroidism.

Discussion: Because of its rarity and similarity to many other acute illnesses, myxedema coma can be easily missed. In our patient, her severe anemia and shock were initially most concerning for a severe occult bleed. However, through thorough history and maintaining a high index of clinical suspicion, she was also promptly treated appropriately for a disease with significant morbidity and mortality.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 67 Category: Clinical Vignette

Program: Spectrum Health MSU
Program Director: Talawnda Bragg, MD, FACP
Presenter: Ogenetega Madedor
Additional Authors: Daniel Summers MD, Maja Huskic MD MPH, Liam Sullivan MD FIDSA

Culture Negative Bartonella Endocarditis, is Surgery a True Indication for Prosthetic Valves?

The gram-negative bacteria Bartonella can be a cause of culture-negative infectious endocarditis (IE) accounting for less than 3.1% of culture-negative cases. Bartonella IE has been estimated between 10-25% cases of IE. Current literature shows six species prominent to IE, however, the main causative agents are B. quintana and B. henslae.

A 54-year-old female with a history of severe mitral regurgitation status post prosthetic MVR in 2015, prior stroke, presents to the emergency department with 2-weeks complaints of dizziness, fatigue, and lower leg lesions. The patient had a known mass seen on a prior transesophageal echocardiogram (TEE) and was started Xarelto. On exam, the patient had a 2/6 holosystolic murmur over the apex along with small maculopapular lesions on the bilateral lower extremities. Initially lab and imaging results were unremarkable. A TEE was performed, which showed evidence for vegetations on the anterior & posterior bioprosthetic mitral leaflets and 0.2 cm mobile echo density on the atrial surface. Blood cultures remained negative throughout the patient's hospital course. Cardiothoracic surgery initially deferred surgery due to negative cultures and unusual presentation of IE. The patient was started on Azithromycin and Rifampin while awaiting serology. Immunofluorescence assay obtained from prior to her discharge showed significantly elevated titers of Bartonella. The patient was switched to Gentamicin with Azithromycin and a 6-week course of doxycycline. Three weeks later she was re-admitted for a successful mitral valve replacement.

Due to nonspecific symptoms and negative blood cultures, diagnosing Bartonella IE can be challenging. Surgical intervention is usually warranted in prosthetic valves due to delayed onset of diagnosis; however it is not a requirement. Few studies have shown early implementation of antibiotic therapy can reduce the need for valvular procedures. This should be further investigated as >70% of cases lead to surgery but have not shown improvement in mortality outcomes.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 68 Category: Clinical Vignette

Program: Spectrum Health MSU
Program Director: Bryan Hull, MD, FACP
Presenter: Nanak Rai
Additional Authors: Saad B. Umar, Kasim Qureshi, Muhammad U. Farooq

Posterior Reversible Encephalopathy Syndrome and Acute Inflammatory Demyelinating Polyneuropathy in a Patient with COVID-19

COVID-19 is known to cause acute respiratory illness but has also been associated with an array of other manifestations. Included are neurologic complications, which range from mild symptoms such as headache, fatigue, dizziness, anosmia, ageusia, and anorexia to serious complications such as ischemic stroke, intracerebral hemorrhage, meningoencephalitis, and seizures. Preliminary evidence suggests the pathophysiology of these complications can be related to direct viral spread to the nervous system via hematogenous route, retrograde axonal transport, or to systemic sequelae of immune-mediated responses. We present a rare case of a patient who developed multiple, sequential, rare neurologic complications associated with acute CoVID-19 illness.

A 75-year-old female with a history of asthma, hypertension, and hyperlipidemia presented to the emergency department for evaluation of generalized weakness. Two weeks prior she had tested positive for SARS-CoV-19 as part of routine workplace screening at which time she was asymptomatic. Three days prior to presentation, she reported onset of myalgias, loss of sense of taste, poor appetite, intermittent headache, non-productive cough, dyspnea with exertion, non-bloody emesis, diarrhea, and generalized weakness. Shortly after admission, she developed hyponatremia and then severe hypoxia followed by unresponsiveness. EEG found frequent seizures and she was started on anti-epileptics. An MRI of the brain was consistent with posterior reversible encephalopathy syndrome (PRES). She then developed subacute progressive proximal quadriparesis with areflexia, dysphonia, and dysphagia. Lumbar puncture showed albumino-cytologic dissociation and she was started on IVIG with improvement of her weakness. A repeat MRI brain showed resolution of PRES. Three months after discharge she was able to ambulate with a cane, was seizure-free, and had subjective short-term memory loss that was improving.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 69 Category: Clinical Vignette

Program: Spectrum Health MSU
Program Director: Bryan Hull, MD, FACP
Presenter: Nanak Rai
Additional Authors: Michael J. Davis, DO, MPH, Ryan Burmeister, MD

A Rare Case of a Pelvic Actinomyces Turicensis Infection in a Male Causing Osteomyelitis and an Encircling, Periurethral Abscess

Actinomyces spp. are anaerobic, filamentous gram positive bacteria that are commonly found as commensal organisms in the oral mucosa, colon, and vagina. Actinomycosis in the pelvis is usually seen in females and is associated with IUD usage. In males, pelvic infections are rare; however, there have been reported cases of genitourinary limited cases including balanitis, urethritis, and prostatitis.

The patient is a 69-year-old male with a history of prostate cancer and a chronic indwelling foley catheter who presented with a 3-4 week history of severe, worsening right groin pain. During this course he was treated for epididymitis by his Urologist. On presentation, he was found to be afebrile, tachycardic, and labs showing neutropenia and lymphopenia. He was evaluated with a CT abdomen and pelvis which showed a right pectineus muscle abscess with subsequent drainage producing yellow purulence. Abscess cultures grew many A. turicensis, Peptostreptococcus spp., Prevotella disiens, Enteroccocus spp., Citrobacter freundii, and Pseudomonas aeruginosa. Urine cultures grew Citrobacter freundii, Pseudomonas aeruginosa, and Enterococcus spp. Given the patient's continued pain after abscess drainage, he was evaluated with CT abdomen pelvis and MR pelvis which showed osteomyelitis of the pubic symphysis with abscess extension encircling the membranous and prostatic urethra. The patient was subsequently treated with long-term Zosyn given comorbidities precluding further intervention on his osteomyelitis or periurethral abscess.
This case demonstrates a pelvic A. turicensis infection in a male with a chronic foley catheter leading to a suspected genitourinary spread actinomycotic osteomyelitis and an encircling, periurethral abscess.

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Poster # 70 Category: Clinical Vignette

Program: Spectrum Health MSU
Program Director: Talawnda Bragg, MD, FACP
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Additional Authors: Ogenetega Madedor MD, MSc, Maja Huskic MD, MPH, Fereshteh Azad MD, Jose Mariano T. Tan II MD, MBA FACC

Group B Streptococcus endophthalmitis: An Early Sign of Infective Endocarditis

Introduction

Endophthalmitis is a purulent inflammation of the intraocular cavity, usually from an exogenous or endogenous source. Group B Streptococcus (GBS) is considered a rare cause of endogenous bacterial endophthalmitis (EBE), accounting for less than 8% of cases. EBE results from hematogenous seeding of the eye during bacteremia, posing a significant threat to immunocompromised individuals.

Case Presentation

A 73-year-old woman with past medical history of non-ischemic cardiomyopathy (EF 25% s/p ICD), diabetes mellitus, and obesity presented to the emergency department with fatigue, headaches, and memory deficits. The initial physical examination was unremarkable. Diagnostic testing was pertinent for a normal WBC count and unremarkable non-contrast CT head. ECG and ICD interrogation demonstrated new diagnosis of atrial fibrillation. She was admitted for rate control with planned electric cardioversion. During her hospital stay, she developed abrupt monocular vision loss of the left eye associated with injection and hypopyon. CT head demonstrated a well-defined hypodensity in the left pons consistent with an old infarct. Ophthalmology service evaluation generated an impression of endophthalmitis. Systemic and intraocular antibiotics were promptly initiated. Blood culture subsequently demonstrated Streptococcus agalactiae bacteremia. Next, a transesophageal echocardiogram was performed, demonstrating an echogenic structure on the aortic valve and an ICD lead consistent with infective endocarditis (IE). Due to progressive vision loss, the patient was transferred to a quaternary retina center for enucleation of the eye which was performed without complications. Complete ICD explantation was performed with plans to reimplant device after completion of a 6-week course of IV antibiotic and intraocular therapy.

Discussion

IE from GBS can cause a rare form EBE with a very poor prognosis. The virulence of an organism has a direct correlation with visual acuity outcomes. IE should be considered as a potential focus of infection in EBE in order to be detected early and improve outcomes.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 71 Category: Clinical Vignette

Program: St Joseph Mercy Hospital Ann Arbor
Program Director: Patricia McNally, MD, FACP
Presenter: Sunaina Gowda Ramesh Babu
Additional Authors: Dr.Michael Bekkerman,DO, Elie G Dib, MD, FACP, Martin Magers, MD

An Unusual Case Report of Locally-Advanced, Unresectable Squamous Cell Carcinoma of the Bladder

Introduction: Pure squamous cell carcinoma (SCC) is a rare subtype of bladder cancer that constitutes only 1 to 5% of all newly diagnosed carcinomas of the bladder in the United States. Patients with pure squamous cell carcinomas of the bladder have historically been excluded from many of the clinical trials that established the treatment paradigm for urothelial carcinomas, and thus the optimal approach to SCC of the bladder is largely unknown.

Case: Our patient is a 62-year-old male who presented to the urology office for evaluation of chronic lower urinary tract symptoms. Initial imaging showed a very large bladder stone measuring 7x4x3cm which appeared to be encasing a central foreign body. Upon detailed questioning, the patient admitted to inserting an automobile part, a 3-inch vacuum line, through his urethra 40 years ago in efforts to catch sperm as a means of contraception. Biopsy of his bladder confirmed this to be invasive squamous cell carcinoma. He opted to proceed with radical cystectomy but intraop his bladder was deemed unresectable due to the extensive pelvic adhesions. He was treated with concurrent chemoradiation using low dose gemcitabine.

Discussion: In the United States, pure SCC of the bladder remains a particularly rare subtype of bladder cancer, with urothelial carcinoma with squamous differentiation being much more common. Management of early-stage pure SCC of the bladder has been surgical in nature by way of radical cystectomy, without an evidence based role for adjuvant chemotherapy or radiation. Current recommendations for unresectable disease suggest an approach using radiation with radiosensitizing chemotherapy as would be done for locally advanced SCC in other regions of the body. More clinical trials are needed to explore chemo/radiotherapy options specific to pure SCC of the bladder.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 72 Category: Clinical Vignette

Program: St Joseph Mercy Hospital Ann Arbor
Program Director: Patricia McNally, MD, FACP
Presenter: Vineetha Rangarajan
Additional Authors: Michael Bekkerman, D.O., Joseph Tworek, M.D., Carolyn Carrera, M.D.

A Rare Case of ALK-Positive Large B-Cell Lymphoma in a 39-year-old Male

Introduction: Diffuse large B-cell lymphoma's rare and aggressive variant, anaplastic lymphoma kinase (ALK)-positive large B cell lymphoma (ALK+ DLBCL) is challenging to diagnose due to its unique histologic features, immunophenotypic characteristics, and overlap with other hematologic neoplasms. There is a lack of consensus regarding treatment. Despite intense conventional therapy, the 5-year survival in ALK+ DLBCL patients is 8% in patients with stage III/IV disease. We present a case of newly diagnosed ALK+ DLBCL treated with dose-adjusted EPOCH (etoposide, prednisone, doxorubicin, vincristine, cyclophosphamide) and intrathecal methotrexate (IT-MTX).

Patient Course: A 39-year-old previously healthy male presented to the hospital with abdominal pain and hematochezia. Review of systems were positive for fatigue and 15-pound weight loss over several months. Vital signs were normal, and the exam was positive for conjunctival pallor. Laboratory findings revealed hemoglobin 4.7, MCV 62, platelets 600. CT of the abdomen and pelvis showed hepatic lesions and intussusception with a small bowel mass acting as the lead point. Biopsy of the hepatic lesion revealed an ALK-positive LBCL. PET/CT demonstrated hypermetabolic abdominal masses and lymph nodes with metastatic liver involvement. He was started on treatment with DA-EPOCH and IT-MTX. Repeat imaging showed improvement in intra-abdominal disease with decreased size of intrahepatic masses.

Literature Review: Initially described in 1997, ALK+ DLBCL typically occurs in lymph nodes of young (median age was 35 years), predominantly male (M: F 3.5:1), and immunocompetent patients. The median survival is 1.83 years, and 5-year overall survival is 34%, which fell to 8% in patients with stage III/IV disease. Effective alternative treatments for ALK+ DLBCL, including the use of new biologic agents such as anti-CD138 monoclonal antibiotics and ALK inhibitors are being explored. The current case adds to the limited pre-existing literature by highlighting an unusual presentation for this disease and demonstrating an effective chemotherapy treatment strategy.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 73 Category: Research

Program: St Joseph Mercy Oakland
Program Director: Geetha Krishnamoorthy, MD, FACP
Presenter: Priyadarshini Dixit
Additional Authors: Israa Al-Gburi MD, Camelia Arsene MD PhD, Karen Hagglund, Anupam Sule MD, Geetha Krishnamoorthy MD FACP

Ventricular Arrhythmias in Patients with Heart Failure with Preserved Ejection Fraction

Introduction:
Ventricular arrhythmias and sudden cardiac death (SCD) are a common manifestation of Heart Failure with reduced ejection fraction (HFrEF).SCD is common in patients with Heart Failure with Preserved Ejection fraction (HFpEF) but the underlying causes and risk factors are unknown. This study aims to look at ventricular arrhythmias and the risk factors associated with HFpEF.

Material and Methods:
The study is based on secondary data analyses using discharge data from the National Inpatient Sample (NIS). The study identified two groups of patients with ventricular arrhythmia: 17,038 in Group 1 (patients with HFrEF) and 5,323 in Group 2 (patients with HFpEF). Analyses included univariate and multivariate logistic regression models. Data were analyzed using the SPSS software version 25

Results:
Patients with HFrEF were more likely to die when compared to patients with HFpEF if they were older, had ventricular arrhythmias, cirrhosis of liver, renal failure, and major and extreme loss of function. Odds ratios (OR) ranged from (1.021 to 50.863). Further analyses revealed that risk factors for ventricular arrhythmia in patients with HFpEF were older age, electrolytes imbalance, and major and extreme loss of function. ORs ranged from (1.008 to 8.569)

Discussion:
Ventricular arrhythmias were observed in a total of 5,323 patients out of 262,139 of group 2 (2%).
Old age and electrolyte imbalance were statistically significant predictors of developing ventricular arrhythmias in HFpEF. Increased mortality was observed in patients with HFpEF who develop ventricular arrhythmias, compared to patients without ventricular arrhythmias. A plausible explanation is that the main treatment of HFpEF as of today is diuretics, which can cause significant electrolytes abnormalities such as hypokalemia and hypomagnesemia which can lead to ventricular arrhythmias. Thus, close monitoring of electrolytes and aggressive replacement is suggested.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 74 Category: Clinical Vignette

Program: St Joseph Mercy Oakland
Program Director: Geetha Krishnamoorthy, MD, FACP
Presenter: Fnu Kavita
Additional Authors: Priyadarshini Dixit, MD; Stephanie Hang, MD; Jonathan Aleman-Rios, MS3; Jacky Duong, DO

Not Just Carpal Tunnel Syndrome!

Introduction:
Hereditary Neuropathy with Pressure Palsy (HNPP) is a rare genetic disorder caused by peripheral myelin protein 22 gene mutation which is located on chromosome 17p11.2. Deletion of this gene leads to HNPP. Prevalence of HNPP is approximately 0.84-16 per 100,000, and can be underestimated due to mild symptoms and commonly misdiagnosed.

Case presentation:
42 -year-old chef presented with hand numbness bilaterally radiating to his forearm for >15 years associated with intermittent tingling, numbness, cramping of his lower extremities. Physical examination was significant for reduced sensation to pinprick in the right & left hand over the ulnar nerve distribution. Phalen's sign was positive bilaterally. Examination of the lower extremities demonstrated reduced sensation over the dorsum of bilateral feet. Lab work showed TSH 1.37mIU, HbA1C 5.5g/dl, vitamin B12 516mcg, 1,25(OH) vitamin D3 66pg/ml, magnesium 2.1mg/dL. Arterial ultrasound of the upper, lower extremities was negative for stenosis. CT head, cervical spine was unremarkable. Subsequently, electromyography (EMG) was performed which was positive for carpal tunnel syndrome.

During his follow up visit, the patient reported that his children (12yo daughter & 10yo son) experienced difficulty in ambulation which was acute in nature over a month and was referred to a pediatric neurosurgeon. They underwent extensive genetic testing which ultimately confirmed the diagnosis of HNPP. Given this new finding, our patient was diagnosed with the same genetic disorder. He was advised to use a brace and referred to a hand surgeon for decompression.

Conclusion:
Rare genetic disorders require extensive workup. In this patient, the clinical presentation, occupation pre-disposed us to believe that he was suffering from Carpal Tunnel Syndrome due to his occupation. This was unmasked after his children were diagnosed with HNPP. Genetic causes should always be considered as one of the differential diagnoses for peripheral neuropathy.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 75 Category: Clinical Vignette

Program: St Joseph Mercy Oakland
Program Director: Geetha Krishnamoorthy, MD, FACP
Presenter: Priyanjali Pulipati
Additional Authors: Maryann Ulasi, Amitha Kakulavaram

Autoimmune Disease with Libman Sacks Endocarditis Presenting with Acute Limb Ischemia

Introduction:
Libman Sachs endocarditis (LSE) or nonbacterial thrombotic endocarditis is a disease that is most likely found postmortem with a prevalence of 0.9% to 1.6%. Among limb ischemia, upper extremity involvement is <5%. We present a case where both these unique conditions meet in a patient with possible antiphospholipid syndrome (APS).

Case:
64-year-old male with a history of hyperlipidemia and hypertension, arrived at the emergency department with sudden onset left upper arm weakness and numbness, associated with pallor and pain which worsened with movement. He denied trauma, family history of blood clots, or prolonged immobilization. On examination, the extremity was cold to touch with feeble distal pulses. Heart auscultation revealed an aortic diastolic murmur. Upper extremity angiogram showed decreased flow distal to the brachial artery at the antecubital fossa with faint runoff. He was started on heparin drip and vascular surgery was consulted. He underwent embolectomy with clot pathology showing fibrinous thrombus. Transthoracic echocardiogram showed a mass on noncoronary leaflet of the aortic valve. Two consecutive blood culture sets were negative. Thrombophilia work-up showed positive lupus anticoagulant and cardiolipin IgM. Unfortunately, we were unable to follow-up on thrombophilia workup 12 weeks after the event to confirm diagnosis.

Discussion:
APS is more common in females and presents as recurrent miscarriages and arterial/venous thrombosis. A strong correlation exists between autoimmune disease and LSE. Pathology of LSE is not clearly understood. It appears to be a reaction to endothelial injury from circulating cytokines or interleukins, which results in vegetations comprised of immune complexes, fibrin, and platelet. Literature review did reveal similar cases of LSE in APS and lupus resulting in limb ischemia. Treatment involves anticoagulation (warfarin preferred) and valve replacement if necessary.

Conclusion:
There is a strong association between autoimmune disease and LSE and an increased incidence of embolization of LSE in lupus.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 76 Category: Clinical Vignette

Program: St Mary Mercy Hospital
Program Director: David Steinberger, MD, FACP
Presenter: Munis Ahmed
Additional Authors: Ramsha Zaidi MD, Kashif Mukhtar MD, David Steinberger MD

Expressive Aphasia and Atypical Aortic Arch Thrombus in the Setting of MTHFR C677T Gene Mutation

Background:
Deficient methylene tetrahydrofolate reductase (MTHFR) activity is the most common form of genetic Hyperhomocysteinemia, which can be prothrombotic via homocysteine-induced vascular injury. Around 30% of the United States population is heterozygous for the thermolabile variant
of MTHFR and 10% is homozygous. We describe a case of acute expressive aphasia and atypical aortic arch thrombus that manifested from MTHFR heterozygosity.

Case Presentation:
87-year-old female nonsmoker with hypertension presented with expressive aphasia. Labs including CBC, BMP, and lipid profile were unremarkable. EKG showed no arrhythmias. SARS-CoV-2 testing was negative. Initial NIH stroke scoring was 2 and was unchanged after TpA administration. CT and MRI head showed no acute intracranial hemorrhage. CT angiography showed aortic arch thrombus. Neurology and vascular surgery were consulted and the patient was started on apixaban. Echocardiogram was negative for intracardiac thrombus. Vitamin B12 and folate levels were normal. Homocysteine level was found to be elevated at 19 micromolar/l. MTHFR gene testing showed heterozygosity for one copy of thermolabile MTHFR C677T gene mutation.

Conclusion:
Limited data suggests that hyperhomocysteinemia may increase the risk for stroke-like events, and homocysteine lowering therapy may modestly reduce the incidence of stroke compared with placebo. However, existing data is not robust to guide standardized therapy or screening. Our case underlines the importance of considering the role of genetic testing in patients presenting with atypical thrombosis or stoke in the setting of limited risk factors.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 77 Category: Clinical Vignette

Program: St Mary Mercy Hospital
Program Director: David Steinberger, MD, FACP
Presenter: Akanksha Mehla
Additional Authors: Chirag Kher MD, Stefan Odabasic MD, Jared Tucker MD

Nitrous Oxide is No Laughing Matter: A Case of Recreational N2O Use and Pulmonary Emboli

Introduction:
Nitrous oxide (N2O) was first discovered by Joseph Priestly in 1772, and was used primarily for public entertainment in its early days. Over the years it has been recognized for its anesthetic effects, used by anesthesiologists and dentists. More recently, the use of N2O has become more widespread in the form of â€œlaughing gasâ€ parties. Below we outline a fatal complication which can emerge from N2O abuse.

Case Description:
A 26-year-old female with a past medical history of morbid obesity, PCOS, pernicious anemia and depression presented with a subsegmental pulmonary embolism in the setting of N2O abuse. The patient had been ordering tanks of N2O on the internet and huffing upto 2 L weekly over the course of one year. She presented with auditory and visual hallucinations after leaving against medical advice from a neighbouring institution. Her labs were notable for macrocytosis, elevated homocysteine levels, and B12 deficiency. During the hospital course her mentation improved, she was anticoagulated, and discharged with apixaban in addition to vitamin B12 and folic acid supplementation.

Discussion:
Though research in the realm of N2O abuse and VTE is limited, animal models and previous case reports have linked chronic N2O inhalant abuse with B12 deficiency, elevated homocysteine levels, and thromboembolic events. When used chronically, N2O is known to decrease levels of active vitamin B12 by inhibiting methionine synthetase, leading to elevated homocysteine, impaired endothelial function and a hypercoagulable state. Though our patient had other risk factors such as obesity, and pernicious anemia we propose that prolonged N2O abuse led to elevated homocysteine levels, predisposing her to developing the pulmonary embolus. As the realm of recreational drug use expands, and access to substances of abuse becomes easier, it is important to keep nitrous oxide in mind given possible correlation in thromboembolic phenomena.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 78 Category: Clinical Vignette

Program: St Mary Mercy Hospital
Program Director: David Steinberger, MD, FACP
Presenter: Ridham Patel
Additional Authors: Preeti Misra, MD

Marijuana Can Take Your Heart-Beat Away: Marijuana Ingestion Causing ASYSTOLE!

Physicians throughout the country are looking for ways to combat the worsening epidemic of recreational marijuana consumption and the various unforeseen sequelae. Even though it is considered a low-toxicity drug, acute and/or chronic use has led to unexpected consequences in otherwise healthy patients. We present a case of a young healthy male with multiple episodes of syncope following use of vaporized marihuana along with unspecified residual sino-atrial node abnormalities.

A healthy 21-year-old Caucasian male presented to the emergency department complaining of loss of consciousness. Prior to arrival, the patient admitted to consuming a vaporized concentrate of marijuana after which he experienced dizziness, palpitations and syncope for about 60 seconds. Even after regaining consciousness, he continued to endorse presyncopal symptoms. While in the emergency department, he suddenly lost consciousness and was found to be pulseless. The episode lasted 20 seconds and the patient had no residual symptoms afterwards. Patient admitted to a similar episode one month prior, which also occurred after consuming vaporized marijuana. Echocardiogram was normal but electrocardiograms revealed nonspecific sinus abnormalities. Patient was discharged home with a Holter monitor, which revealed 1% burden of premature atrial contractions and 2 episodes of symptomatic premature ventricular contractions. Recent studies have shown that various molecules in this extremely popular recreational drug causes adverse structural and functional effects in the human body in a dose-dependent manner. One postulated reaction is excessive vagal stimulation; We believe that this patient's palpitations, dizziness and syncope were caused by parasympathetic overtone. Sinus node dysfunction was evident on electrocardiograms even after the resolution of syncope. It is crucial to remember that marijuana smokers who present with symptoms such as palpitations and syncope should be offered cardiac monitoring as they can potentially have residual life-threatening arrhythmias. In addition, they should always be counselled to stop using marijuana.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 79 Category: Research

Program: University of Michigan Med-Peds
Program Director: Michael Lukela, MD
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Additional Authors: Justine Wu MD, Mark Norris MD

Reproductive Counseling in Women with Congenital Heart Disease: A Survey of Primary Care Clinician Comfort and Knowledge

Introduction

There are currently 1.4 million adults with congenital heart disease (CHD) living in the US. The majority of women born with CHD reach reproductive age, but over half do not receive family planning education. 75% of patients with CHD are lost to cardiology follow-up during their prime reproductive years, but the majority continue to see their primary care physician (PCP) making them uniquely poised to provide reproductive health education. There is no current literature assessing PCP comfort and competence in providing reproductive counseling to this unique population.

Methods

A survey was distributed to a convenience sample of PCPs treating reproductive-aged women at the University of Michigan.

Results

The final sample included 163 providers (response rate= 47%), 43% of whom were currently caring for premenopausal women with CHD. Although half (46%) of respondents felt they should take primary responsibility for reproductive counseling, in women with CHD the majority (86%) were uncomfortable discussing pregnancy risk, and only half (54%) felt comfortable providing basic contraceptive counseling to these patients. Few providers felt they had the knowledge necessary to provide individualized contraception (46%) or pregnancy risk (10%) counseling. Providers were more likely to prescribe a medically contraindicated form of contraception to a hypothetical patient with simple CHD (57%) versus a complex cardiac lesion (30%) and few respondents identified all medically appropriate forms of contraception for these patients (15% and 25% respectively). Clinicians were also more likely to underestimate the risk of pregnancy in a patient with simple CHD (25%) compared to one with complex CHD (10%).

Conclusion

PCPs have low degrees of comfort addressing reproductive health in women with CHD and knowledge gaps in providing medically appropriate care. Interestingly, women with simple CHD were more likely to receive medically inappropriate counseling. Targeted education of PCPs could enhance provider comfort and improve patient care.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 80 Category: CQI/EBM

Program: Wayne State University - Detroit
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A Near-Peer Internship Bootcamp: A Novel Approach to Internship Orientation

Purpose

Many interns experience challenges in their new roles as physicians. Orientation are typically delivered by faculty/administration and do not focus on the internâ€™s daily duties from near-peer perspectives. To address this, we developed a short, focused, bootcamp program delivered by residents to help interns with their roles and responsibilities. This included mentorship in oral presentations, the written composition of notes, and guidance for utilizing the electronic health record (EHR).

Approach

The program was conducted over six days from June 25th to June 30th, 2020, at Detroit Medical Center, in Detroit, MI. Participation was voluntary. Interested senior residents (mentors) were assigned incoming interns (mentees) on a 1:2 basis. Mentors met with mentees during five virtual sessions lasting between 40-60 minutes. A 14-question post-program survey was conducted to assess the participantâ€™s perceptions, experience, and overall satisfaction with the program.

Outcomes

A total of 15 senior residents (11 PGY-1 and 4 PGY2) and 29 interns (76% of the programâ€™s total interns) participated. Of those who participated, 18 (62.1%) responded to the survey. 83.3% of respondents reported that the program helped them better understand the daily workflow; 49.9% expressed that they were more comfortable navigating the EHR. All respondents (100%) agreed the program should continue in the next academic year, with 83% responding that they would be willing to participate next year as mentors.

Discussion

A short and focused near-peer mentor program, prior to the start intern year, positively impacted the daily workflow, comfort in navigating the EHR, and critical skills required by interns. Due to an overwhelmingly positive response, the program is being incorporated directly into the intern orientation curriculum.

Significance

Instituting a similar program may positively impact the intern experience overall while improving the intern level of understanding of their day-to-day responsibilities and comfort utilizing the electronic health record.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 81 Category: Research

Program: Wayne State University - Detroit
Program Director: Jarrett Weinberger, MD, FACP
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Large Bowel Obstruction Caused by Metastatic Prostate Cancer: A Case Report

Bowel obstruction is a frequently encountered condition worldwide that causes numerous admissions to hospitals. Metastatic carcinoma has been identified as one of the infrequently encountered causes of bowel obstruction. Prostate cancer, on the other hand, typically metastasizes to the bone, lungs, lymph node, liver and brain. There are few case reports of prostate cancer metastasizing to the intestine. With most of the casesnot manifesting as bowel obstruction, in addition, it rarely metastasizes to the rectum. We report the case of a 75-year-old male who presented with bowel obstruction due to narrowing and stricture of the rectum. Primary rectal mass was initially diagnosed, but upon further investigation, it was found that the mass resembled prostate tissue.

Prostate cancer metastasis to the rectum was therefore the final diagnosis. Patient obstruction was managed surgically with a colostomy. Patient was later referred to the oncology department for chemotherapy and hormonal therapy treatment plan.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 82 Category: Clinical Vignette

Program: Wayne State University - Detroit
Program Director: Jarrett Weinberger, MD, FACP
Presenter: Anirudh Damughatla
Additional Authors: Sidra Illyas and Paramaveer Singh

Skin Rash During Febrile Neutropenia: Finding the Diagnosis Among the Multiple Confounders

We present an interesting presentation of Pemphigoid Dermatitis linked to cefepime in a setting of febrile neutropenia. A 63-year-old woman who has PMH of CLL with recent Richter's transformation was admitted with febrile neutropenia and started on cefepime. After 5 days of treatment, she began having itching and a rash that first appeared as a classic morbilliform drug eruption mostly on cubital fossa bilaterally. Eventually, the purpura spread to all areas previously affected by the drug eruption, with worse spots occurring where the patient placed the most pressure (right side of face that she sleeps on and left leg that is wrapped for edema). The eyes were unaffected. In the lower extremity, there was edema associated with vesicle and ulcer formation. Nikolsky sign was negative. Skin biopsies of the bullae were performed, which revealed pemphigoid dermatosis. With the discontinuation of cefepime and supporting with triamcinolone 0.1% (trunk & extremities), hydrocortisone 2.5% (face and skin folds), and clobetasol 0.05% ointment (areas with blisters forming/formed) the rash started to improve. Even though patient continued to be febrile and pancytopenic, dermatology and ID specialists concluded that the rash was not caused by her fevers but was rather a sequela of her medication eruption. Pemphigoid dermatitis is a condition that affects the lower layer of the skin, between the epidermis and the dermis, producing tense blisters that do not break easily. It is usually an autoimmune disorder.Â Penicillins, especially amoxicillin, and less likely but cephalosporins are known to cause such rash. It is important to consider cefepime in purpuric cutaneous drug eruption and should be investigated as a cause. Cefepime belongs to the 4th generation of cephalosporins, which is used most often in the ED for broad-spectrum coverage.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 83 Category: Clinical Vignette

Program: Wayne State University - Detroit
Program Director: Jarrett Weinberger, MD, FACP
Presenter: Zaid Kaloti
Additional Authors: Zaid Kaloti MD, Sarvani Surapaneni MD, Abubekr Mohamad MD, Jenna Yousif MD, Diane Levine MD

Impact of COVID Pandemic on Early Onset Colorectal Cancer Diagnosis and Treatment

Introduction:
Early-onset Colorectal Cancer (eCRC) is colorectal cancer (CRC) diagnosis in individuals younger than age of 50. Since March 2020, the coronavirus disease 2019 (COVID-19) pandemic caused national disruptions in cancer screening for an unknown duration. Emerging data from multiple countries show gastrointestinal cancer diagnosis decreasing steeply since this disruption; with fears of pandemic related delays in cancer diagnosis and treatment causing an increase CRC related death. We present a young patient with eCRC and no previous risk factors whose diagnosis and treatment was delayed during the pandemic.

Case:
An 18-year-old male with no past medical or family history presented with four months history of 15 pounds unintentional weight loss, and dull diffuse abdominal pain. Examination showed diffuse abdominal tenderness. Rectal exam revealed melena. Lab work showed iron deficiency anemia with hemoglobin of 4.5. The patient improved following two units of blood transfusion, got discharged with outpatient gastroenterology follow-up. However, due to pandemic fear he missed his appointments. A few months later, he presented with worsening abdominal pain. Abdominal imaging showed thickening of colon at the hepatic flexure. Colonoscopy revealed a large ascending colon mass, biopsy showed signet ring carcinoma. Exploratory laparotomy showed tumor metastases to retroperitoneum, gallbladder, and transverse colon, confirming stage IV metastatic CRC. Resection of ascending colon with diverting colostomy was performed to relieve his obstruction. Genetic testing was positive for TP53 and BMPR1A suggestive of Juvenile Polyposis syndrome. Given stage-IV presentation, treatment options were limited, he died 6 months later.

Discussion:
Although our patient did not meet the criteria for CRC screening, his presenting symptoms should have prompted a more urgent evaluation. The delay in care caused by COVID pandemic, has resulted in a nationwide system failure, driven by fear of COVID illness has created s new healthcare disparity.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 84 Category: Clinical Vignette

Program: Wayne State University - Detroit
Program Director: Mohamed Siddique, MD, FACP
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Orbital Compression Syndrome Due to Orbital Cellulitis: When Physicians Shouldn't Turn a Blind Eye

Orbital compression syndrome is a rare condition characterized by sudden increase in intra-orbital pressure, usually seen due to orbital bleeding secondary to trauma or surgery and rarely due to infection. Ischemia affecting optic nerve and retinal function can lead to irreversible vision loss. Timely surgical intervention can preserve vision.

74 year old male with past history of Diabetes, Hypertension, chronic sinusitis and left cataract surgery in 2018, presented with Right eye swelling for 3 days followed by redness, purulent discharge and pain on eye movement. He was unsure of changes in vision as his eyelids were matted close. On visual acuity testing- patient was unable to see fingers. CT orbit showed significant right and mild left periorbital soft tissue swelling without postseptal extension and air fluid levels in paranasal sinuses. MR venography was negative for venous thrombosis. Initial canthotomy and catholysis of right eye along with incision and drainage to relieve the intraocular pressure was performed. Abscess fluid was collected for culture. Antimicrobials Unasyn, vancomycin and amphotericin until culture results were available. Due to no clinical improvement and and increasing eye pressures. Right orbitotomy, Right upper Eyelid Incision and drainage, canthotomy and cantholysis of Right lateral canthus was performed, and tissue cultures obtained. Swelling and pain improved, However Right eye vision could not be recovered. Cultures confirmed MRSA, he was discharged with Bactrim for 14 days and outpatient follow up after 2 weeks.

Orbital compression syndrome caused due to orbital cellulitis is an unusual presentation. The diagnosis of orbital compartment syndrome is completely clinical. Early identification and urgent orbital decompression, even before imaging is essential to prevent permanent vision loss. Sampling of orbital content for microbiology and treatment with antibiotics along with surgery to treat the underlying cause, is the main line of treatment in these patients.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 85 Category: Clinical Vignette

Program: Western Michigan University Homer Stryker SOM
Program Director: Joanne Baker, MD, FACP
Presenter: Mariana Camelo Pereira
Additional Authors: Rachel Zamihovsky MS3, Emmanuel Dimitri Foko Tito DO, Melissa Hendrix Olken MD

Neurosarcoidosis Mimicking a Metastatic Paraspinal Malignancy

Sarcoidosis is a multisystem inflammatory disorder characterized by non-caseating granulomas. Central nervous system involvement is seen in up to 25% and typically involves meningeal disease resulting in multiple cranial neuropathies, facial nerve palsy is the most common presenting symptom. The clinical and radiographic findings of neurosarcoidosis and malignancy might mimic one another, making the initial distinction between the two challenging in most cases. We report a rare case of neurosarcoidosis with cranial, peripheral nerve, and osseous involvement in the absence of pulmonary features. A 52-year-old African American female with a past medical history of atrial fibrillation presented to the Emergency Department (ED) with dizziness, headaches, diplopia, paresthesia in lower limbs, and lower back pain. Neurologic examination was notable for abducens nerve palsy, motor and sensation deficits in the right lower extremity, and right-sided ataxia with gait and Romberg testing. Chest x-ray and computed tomography angiogram (CTA) of the head and neck revealed no acute findings. Magnetic resonance imaging (MRI) of the brain showed multiple abnormal thickening and enhancing of cranial nerves VI, III, V2 and V3 segments of the trigeminal nerves suspicious for metastatic disease. Subsequent MRI of the lumbar spine showed osseous lesions at the L4 vertebrae with a large right paravertebral mass. Lumbar puncture results showed a critically elevated white cell count with elevated levels of angiotensin-converting enzyme within the cerebrospinal fluid (CSF). Biopsy of the paravertebral mass revealed non-necrotizing granulomas composed of epithelioid histiocytes leading to a diagnosis of neurosarcoidosis. She was treated with a course of intravenous dexamethasone while in the hospital and was discharged home on oral dexamethasone. At her post-discharge telephonic follow-up, her neurological symptoms had significantly improved.

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Poster # 86 Category: Clinical Vignette

Program: Western Michigan University Homer Stryker SOM
Program Director: Joanne Baker, MD, FACP
Presenter: Emmanuel Dimitri Foko Tito
Additional Authors: Kelsey Suggs; Nirmal Muthukumarasamy, MD; Mark Schauer, MD

Meningitis Secondary to Disseminated Gonococcal Infection in a 24 year old Female

Disseminated gonococcal infection happens in 0.5 to 3% of the patients infected with Neisseria gonorrhoea. Involvement of the central nervous system is a rare manifestation of disseminated gonorrhea; joints remain the most common site of gonococcal dissemination. Gonococcal meningitis was first reported almost 100 years ago in 1922 and literature search reveals a little over 20 cases of this clinical entity. Disseminated gonococcal infection is a clinical entity characterized by arthritis, tenosynovitis, rash and polyarthralgia, with meningitis being a rare manifestation. This paper highlights one of the very few cases of gonococcal meningitis from disseminated gonococcal infection. We report a case of a 24-year-old otherwise healthy woman with no prior medical history who presented with disseminated gonococcal infection manifesting as meningitis. Cerebrospinal fluid (CSF) polymerase chain reaction (PCR) were negative on initial testing for both Chlamydia trachomatis and Neisseria meningitidis. The presence of pharyngitis, knee arthralgia, joint effusion, and recent history of sexually transmitted infection in her partner raised our suspicion for Neisseria gonorrhoeae. CSF and throat swab PCR were found to be positive for Neisseria gonorrhoeae. Blood and CSF cultures were negative for bacterial growth. The patient was treated with a total of 14 days of intravenous (IV) ceftriaxone. She was discharged with no neurological sequelae.

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Poster # 87 Category: Clinical Vignette

Program: Western Michigan University Homer Stryker SOM
Program Director: Joanne Baker, MD, FACP
Presenter: Akshaya Gadre
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Cryptogenic Organizing Pneumonia Presenting as a Cavitary Lesion

Introduction

Cryptogenic organizing pneumonia (COP) is a rare type of interstitial lung disease, usually presenting with radiologic findings of ground glass opacities or migratory infiltrates. Here, we present a case of a 53-year-old man who was found to have a cavitary lesion, proven to be COP on biopsy results.

Case

53-year-old man with history of coronary artery disease, diabetes mellitus and radiographically diagnosed sarcoidosis was admitted for management of multiple foot wounds and suspected peripheral arterial disease. Patient also complained of a chronic dry cough and owing to his history of sarcoidosis, patient underwent a computed tomography (CT) scan, revealing an enlarging cavitary lesion of 5 cm. Patient underwent a CT guided biopsy, suspecting malignancy, but instead was found to have COP. Patient was then started on steroids and followed up with pulmonary clinic for further management.

Discussion

Organizing pneumonia has triggers ranging from drugs (amiodarone, beta blockers, carbamazepine etc) to rheumatic diseases and infections. With no identifiable triggers, a diagnosis of COP is made. Common symptoms include dry cough lasting from weeks to months, dyspnea, fever, and weight loss. While there are no specific lab studies, leukocytosis is present in approximately 50% of patients. Radiologic findings vary from migratory opacities and ground glass opacities to rarely seen consolidating and cavitary lesions. Mild to moderate restrictive patterns can be seen on pulmonary function test. Typical histopathologic findings include plugs of granulation tissue involving alveoli and alveolar ducts. Treatment is prednisone dose at 1 mg/kg for six to eight weeks with appropriate tapering if patient improves.

Conclusion

COP is a diagnosis of exclusion, made when histopathologic features of organizing pneumonia are seen without any known triggers. A CT guided or transbronchial biopsy is used to obtain samples when it is suspected, and it is treated with steroids.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 88 Category: Clinical Vignette

Program: Western Michigan University Homer Stryker SOM
Program Director: Joanne Baker, MD, FACP
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An Unusual Case of ACS Secondary to Spontaneous Coronary Artery Dissection

Introduction: Spontaneous coronary artery dissection (SCAD) is an uncommon cause of myocardial infarction (estimated 0.1 to 4 percent of causes of acute coronary syndrome) and involves a non-traumatic separation of a coronary arterial wall. In most cases, a predisposing arterial disease is identified such as fibromuscular dysplasia, system inflammatory conditions, and connective tissue disorders. However, up to 20 percent of cases are idiopathic.

Case: 48-year-old female with a past medical history of hypertension, obesity, gastrojejunostomy, previous COVID infection (five months prior) presented with typical chest pain found to have an NSTEMI. Left heart catheterization (LHC) showed spontaneous coronary artery dissection of the mid through distal left anterior descending artery. Rheumatological screening and computed tomographic angiography of the chest/abdomen/pelvis were unrevealing, and other risk factors for coronary artery disease (CAD) were not found. Patient continued to have chest pain and a repeat LHC showed no changes in the lesion, however a left ventricular aneurysm and thrombus were found. Patient's chest pain improved, and she was discharged on carvedilol, atorvastatin, isosorbide mononitrate, ranolazine, clopidogrel, and warfarin.

Discussion: SCAD should be suspected in any young woman without a history or risk factors for CAD, who presents with typical chest pain. In this case, no clearly identified associated disease or cause was identified. Patient's previous COVID infection may have caused widespread inflammation predisposing the patient to having SCAD. The preferred treatment involves conservative therapy with aspirin, beta blocker, statin, and short-term clopidogrel. Revascularization in patients with SCAD is difficult and associated with high rates of complications due to the fragility of the vessels and propagation of the dissection. However, the optimal treatment for SCAD remains unknown, and there is a high rate of recurrent events.

ACP Michigan Chapter Scientific Meeting 2021

Poster # 89 Category: Clinical Vignette

Program: Western Michigan University Homer Stryker SOM
Program Director: Joanne Baker, MD, FACP
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Additional Authors: Mariana Camelo Pereira; Sarah Smith; Thomas Melgar

Post-traumatic Pulmonary Herniation, an Uncommon Cause of Chest Pain

Lung herniation is a clinical entity characterized by protrusion of pulmonary tissue through an area of weakness in the chest wall. It can be classified as spontaneous, traumatic, or secondary to underlying pathologies. Smoking, obesity, and COPD have been reported as risk factors for the development of lung hernias.

Our patient is a 56 y.o. male with a history of COPD, crack-cocaine use, current cigarette smoking, and obesity who presented to the hospital due to left-sided lateral chest wall tenderness.

The patient reported he had been having worsening pain for the past 2 weeks. He did not spontaneously endorse any trauma to the region, but he reported bruising on the chest wall and endorsed a syncopal event associated with a coughing spell around the time when symptoms started, stating he might have fallen and hit that area. Additionally, patient had noticed worsening of his chronic cough, which exacerbated the pain, as well as shortness of breath, pleuritic chest pain, and wheezing.

On initial evaluation, he was found to be hypoxic and was briefly started on BiPAP, but successfully weaned to nasal cannula. On exam, the patient had wheezing and significant tenderness to palpation of the left anterolateral thoracic wall. He also had a large area of ecchymosis on the left chest wall extending to the left flank. Labs were significant for leukocytosis. A CTA of the chest was performed and showed bibasilar infiltrates, small left pleural effusion, and a contusion on the left flank. It also showed a left-sided pulmonary herniation between ribs 8 and 9, without any evident rib fractures.

The patient was started on antibiotics and steroids for suspected community-acquired pneumonia and COPD exacerbation. Cardiothoracic surgery was consulted for assessment of pulmonary herniation and recommended conservative management. His pain was managed with multimodal therapies including opioids, acetaminophen, lidocaine patch, and topical NSAIDs.