

Saturday Poster #1

Category: Clinical Vignette

Program: Ascension Providence Hospital

Program Director: Robert Bloom, MD, FACP

Presenter: Maria Karapetyan

Additional Authors: Ali Zakaria, MD1; Ziad Iskenderian, MD1; and Eliot Husarsky, MD2

TB or Not TB ?

Tuberculosis (TB) causes approximately 3 million deaths per year worldwide. Abdominal TB comprises around 5% of all cases of TB, and it is mostly diagnosed in immunocompromised patients.

A 19-year-old previously relatively healthy female, without significant past medical history, presented to the hospital with three weeks of abdominal pain, bilious emesis, diarrhea, and 20 pounds of sudden weight loss. She had abdominal tenderness and ascites. Family history revealed that her grandmother was diagnosed and treated for pansensitive TB. She did not live with her grandmother but was certainly exposed during regular visits. At that time, she was tested for latent TB and it was negative. Initial ultrasound of abdomen, pelvis and subsequent computed tomography (CT) of the abdomen revealed bilateral adnexal lesions with mesenteric lymphadenopathy. Carcinoembryonic antigen and Carbohydrate antigen 19-9 were positive. Due to the initial concern of carcinomatous disease, OB/GYN performed an open laparotomy. The patient suffered six enterotomies, due to "Frozen Abdomen" during surgery. Multiple specimens were obtained intraoperatively revealing granulomatous disease. Mycobacterium tuberculosis complex testing by polymerase chain reaction was negative. Rifampin, levofloxacin and isoniazid were issued parenterally. Over the next month, multiple surgeries were required. She ultimately developed sepsis and died due to multiorgan failure. The final cultures, six weeks later, confirmed TB.

Abdominal TB circumvents convention. Most cases are seen in immunocompromised patients. Although it is considered a rare occurrence, the history and the clinical picture were indicators that this patient required a deeper look for diagnosis out of the ordinary.

Saturday Poster #2

Category: Clinical Vignette

Program: Ascension Providence Hospital

Program Director: Robert Bloom, MD, FACP

Presenter: Chad Stennett

Additional Authors: Samira Ahsan, MD; Muhammad Ahsan, MD; Robert Singer, MD.

Hepatitis C: The Potential Harbinger of Dermatologic Disease

Chronic hepatitis C virus (HCV) infection has become one of the most common causes of chronic liver disease and affects an estimated 2.4 million individuals in the United States alone. A substantial number of extrahepatic manifestations are seen over the natural history of the disease, with skin being a commonly involved organ. Porphyria cutanea tarda (PCT) is a well-documented dermatologic condition associated with HCV and among this population is believed to carry an overall prevalence as low as 1%.

A 61-year-old African American male with a history of ESRD, CVA, and intravenous drug use presented with complaints of generalized weakness and was found to have pseudomonas bacteremia. On physical examination multiple lesions in various stages of healing on the dorsum of both hands were observed. He described them starting as blisters which would easily break, eventually forming a scab. A shave biopsy performed after discharge revealed porphyria and elevated serum porphyrin levels confirmed the diagnosis of PCT, distinguishing it from pseudoporphyria—a condition mimicking PCT both clinically and histologically but without serum porphyrin elevation. The patient was screened for HCV infection with a positive result and since beginning treatment has noticed near resolution in his skin symptoms.

It is often times years before individuals with HCV infection develop symptoms and when they do, the first signs may manifest in the skin. This case highlights just one of the considerable number of dermatologic conditions associated with HCV infection and the need to further investigate skin findings in this group of individuals.

Saturday Poster #3

Category: Clinical Vignette

Program: Ascension Providence Hospital

Program Director: Robert Bloom, MD, FACP

Presenter: Rabia Toor

Additional Authors: none

Acetaminophen Strikes Back: Generalized Bullous Fixed Drug Eruption Caused by Poly-Sensitivity to Acetaminophen and Fluconazole

Fixed drug eruption is an unusual cutaneous drug reaction causing well demarcated, dusky lesions secondary to an offending medication. Most commonly caused by trimethoprim/sulfamethoxazole, isolated cases of fixed drug eruptions have also been reported to be caused by two chemically unrelated drugs, an occurrence known as poly-sensitivity. A 25 year old woman presented to the hospital following the development angioedema of the lips and periorbital area following ingestion of fluconazole. Sharply demarcated macules occurred in identical locations as when she had ingested acetaminophen two years ago. Her symptoms resolved after treatment, however, after discharge, she had recurrence of angioedema, and bullae formation. A skin biopsy was collected and showed vacuolar dermatitis without full thickness necrosis. These findings favored a fixed drug eruption. Over the course of ten days, with bullae resolution, the patient demonstrated epidermal skin necrosis. She was treated with high dose prednisone and fully recovered

This patient had an identical reaction two years ago with acetaminophen, however with fluconazole, additional macular lesions were evident on the upper extremities and trunk, Generalized bullous fixed drug eruptions are a rare subset of FDE. Reported cases have included reactions to fluoroquinolones, tetracyclines and antipsychotics. However, this case is valuable in that it demonstrates that severe GBFDE can occur with common drugs like acetaminophen and fluconazole. Even rarer, are reported cases of poly sensitivity, thus, this case encourages research into 'poly-sensitivity phenomenon'.

Saturday Poster #4

Category: Clinical Vignette

Program: Ascension Providence Hospital

Program Director: Robert Bloom, MD, FACP

Presenter: Abhiroop Verma

Additional Authors: Chad Stennett, MD; Samira Ahsan, MD

Internist Beware: Keeping Hereditary Cancer Syndromes in Mind Be it in Infancy or Old Age

Von Hippel-Lindau (VHL) syndrome is a rare hereditary cancer syndrome with a wide spectrum of manifestations including benign and malignant tumors of the CNS, pancreas, kidney, and reproductive tract. The mean age of initial presentation is 26 years of age but it can present anytime from infancy through the eighth decade of life.

A 64-year-old African American male with a history of hypertension, hyperlipidemia, type II diabetes and a family history of prostate and pancreatic cancers presented with a two month history of left-sided abdominal pain and unintentional weight loss. His physical examination was unremarkable and contrast imaging of the abdomen and pelvis revealed a necrotic left renal mass and multiple calcified cystic pancreatic lesions concerning for an intraductal papillary mucinous neoplasm. He underwent surgery and pathology confirmed the lesions to be clear cell renal cell carcinoma and serous cystadenoma of the pancreas. The concurrence of these findings raised the possibility of VHL syndrome. He subsequently underwent genetic testing which confirmed a pathogenic mutation of the VHL gene.

VHL syndrome presents a clinical challenge because it is not exclusive to one particular organ. This leads to great variability in presentation, even within the same family and despite the same genetic defect. This case illustrates that even though familial cancer syndromes are more likely to present early in life, VHL syndrome has a vast heterogeneity in the temporal aspect of its clinical manifestations.

Saturday Poster #5

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Reynald John

Additional Authors: Reynald John, MD, Ryan Bean, MD, Swetha Edla, MD Ascension- St. John Hospital, Grosse Pointe, Michigan

Lethal Methotrexate Toxicity Despite Low Dosage and Folate Use

Introduction: Methotrexate (MTX) is recommended by the American College of Rheumatology as a first line agent in the treatment of rheumatoid arthritis. As folate administration is generally enough to limit toxicity, low dose MTX toxicity rarely manifests as marrow suppression, mucositis, or severe renal failure. We present a case where a combination of low albumin, old age, acute renal failure, and pleural effusions lead to lethal toxicity.

Case: A 64 year old woman with severe RA on low-dose methotrexate and folic acid supplementation presented with encephalopathy and Stage III acute renal failure after having diarrhea and decreased PO intake days prior. She was fluid resuscitated and given broad spectrum antibiotics in the emergency department. She was found to have overdosed on opioids and was treated in the ICU with naloxone and bicarb drips. She was found to be hypoalbuminemic. Right thoracentesis was done on a large pleural effusion which revealed exudative fluid. Patient developed pancytopenia resistant to Granix. She developed mucositis followed by pneumonia. She became hypotensive, was placed on comfort care measures, and expired. MTX crystals were found in her urine afterward.

Discussion: Methotrexate should be given with folate to limit toxicity. Risk factors for toxicity include age, worsening renal function, hypoalbuminemia, diabetes, and steroid use. Third space fluids like pleural effusions serve as MTX reservoirs and can extend its terminal elimination half-life, raising the likelihood of adverse events. It is important to recognize MTX toxicity early as treatments like glucarpidase and leucovorin are only effective early on.

Saturday Poster #6

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Zhi Li

Additional Authors: Zhi Li MD, Ryan Bean MD, Raghavendra Kamath MD, FACP Ascension St John Hospital, Gross Pointe, Michigan

Metformin Associated Lactic Acidosis (MALA) Resulting in Multiorgan Failure and Death

Metformin, a commonly used antihyperglycemic agent, has a good safety profile, but can cause rare and potentially lethal complications, especially when used in the setting of a pre-existing renal impairment.

A 59-year-old African American Male with Type 2 diabetes mellitus, non-ischemic cardiomyopathy with ejection fraction of 30%, and hypertension, presented with severe chest and abdominal pain for two days. Just days prior, he was started on metformin 1000mg bid while having a resolving acute kidney injury. Physical exam was positive for a borderline hypotension, and a diffusely tender abdomen with guarding, but no rigidity. His lab work was significant for a worsening AKI, acute liver failure and lactic acidosis to 9.5 mmol/L. Toxicology and infectious workup was negative. CT angiogram of chest/abdomen/pelvis was unremarkable. He was started on CVVHD. His liver function and renal function improved with fluid resuscitation, but he left against medical advice. Three days later, he returned to the hospital with altered mental status. His kidney and liver functions were markedly worse and the lactic acid went up to 18.8 mmol/ml. Hemodialysis was restarted. The patient went into shock, requiring vasopressor support, and mechanical ventilation. Unfortunately, his condition deteriorated despite treatment and he passed away shortly thereafter.

In severe cases of metformin-induced lactic acidosis (MALA), patients can show signs of shock and multiorgan failure. Due to the low prevalence rate of MALA, high vigilance is required for prompt recognition. Proper dosing, risk factor awareness, are important considerations when treatment with Metformin is considered.

Saturday Poster #7

Category: Research

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Safa Maki

Additional Authors: Aryan Shiari, MD; John Lee, MD; Susan Szpunar, PhD.

Code Status Documentation at Ascension St. John Hospital

Introduction: End-of-life (EOL) care involves immense ethical and economic burdens. The format of the Resuscitation Orders Sheet (ROS) at our hospital has led to confusion when patients declining Life-sustaining-measures (LSM) then endure an acute deterioration and cannot restate their wishes and family are unavailable. The patient often ends up receiving LSM and transferred to ICU until further clarification.

Methods: This is a simulation study with residents and nurses who were presented six cases of patients at EOL. After each case, a completed current ROS was displayed, and participants were asked if they would: a) readdress resuscitation status b) proceed with stat intubation and mechanical ventilation c) proceed with stat electrical cardioversion d) proceed with stat vasopressors e) initiate transfer to ICU and f) initiate comfort measures. The same six cases were represented, followed by a redesigned ROS. Changes in responses and patient disposition based on the new sheet compared to the old one were assessed with the Wilcoxon Signed Rank test.

Results: Thirty-three residents and 13 nurses participated in the study. The redesigned ROS significantly reduced the overall frequency of readdressing patients' code status ($p < 0.0001$), offering life sustaining measures ($p < 0.0001$), and frequency of transfers to ICU ($p < 0.0001$). It also showed significant increase in initiating comfort care measures ($p < 0.0001$).

Conclusions: In a simulated environment, the new sheet led to a significant reduction in the frequency of providing non-beneficial care and ICU transfers, allowing focus on the patient's comfort instead. Further pilot testing of the redesigned sheet is recommended.

Saturday Poster #8

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Abdulla Nasser

Additional Authors: Abdulla Nasser MD, Mohammed Barawi MD Ascension St. John hospital
Grosse Pointe Woods, MI

Resolution of Chronic Hepatitis B in a Patient on Antiviral Therapy and Chemotherapy

Chronic Hepatitis B (HepB) is one of the most common infections worldwide, it may lead to cirrhosis and hepatocellular carcinoma. Acute flare-ups of HepB are common in patients on chemotherapy.

HepB antiviral medication, have been proposed to be used prior to start chemotherapy, during and up to 12 months post chemotherapy to control the virus and prevent complications.

Case report:

A 48-year-old male with a PMH of chronic untreated stable hepatitis B virus (HBV) presents with gross hematuria. Further workup yielded the diagnosis of small cell carcinoma of the bladder.

The patient had been on close surveillance for his HepB, with lab work including Liver enzyme, alpha-fetoprotein, HepB panel, and abdominal ultrasound (AUS) every 6 months. HepB panel had been consistently positive for HepB S-antigen and HepB E-antigen. AUS had repeatedly shown a stable nonspecific fatty liver infiltration.

After cancer excision, he received Etoposide, cisplatin, and Neulasta for 4 months, he underwent multiple radiation therapies, and he was started on VIREAD before, during and 6 months after the end of chemotherapy.

Nine months after the beginning of treatment, the cancer was in remission, and lab work showed HepB cure, that was evident in the seroconversion from HepB S-antigen to S-antibody and by an undetected HepB viral DNA level.

Discussion:

Here we presented a case of a patient with a chronic HepB infection, E antigen + who cleared his viral infection by being on chemotherapy and Tenofovir prophylaxis. The potential role of this regimen in HepB treatment may merit further investigation.

Saturday Poster #9

Category: Clinical Vignette

Program: Ascension St. John Hospital
Program Director: Raymond Hilu, MD, FACP
Presenter: Zaid Noori
Additional Authors: Daniel Lebovic MD

Rare Case of Thrombotic Thrombocytopenic Purpura (TTP) Presenting as Recurrent Strokes Preceding Hematological Findings by Weeks

Introduction:

Thrombotic thrombocytopenic purpura (TTP) is a hematological emergency caused by reduced activity of von Willebrand factor-cleaving protease ADAMTS13. It involves thrombocytopenia, hemolytic anemia, and sometimes organ damage. We report an unusual TTP presentation of recurrent neurological symptoms preceding hematological manifestations by weeks.

Case presentation:

A 48-year-old female with a history of uterine leiomyoma, and hypertension presented with two episodes of hemiparesis and numbness. Brain MRI on both occasions showed small infarcts in the right anterior cerebral artery distribution. She was stabilized and discharged on aspirin and clopidogrel. However, a week later, the patient presented with right sided hemiparesis and numbness. Imaging studies showed evidence of infarction in the left MCA distribution. Due to the high clinical suspicion of a cardioembolic etiology, rivaroxaban was initiated. One week later, she presented with vaginal bleeding. Her labs showed a 4 gm drop in hemoglobin, and platelets count of 10 K/mcl (previously normal). Hemolysis workup was positive, including schistocytes on peripheral blood smear. ADAMTS13 activity was <5%. Plasma exchange, steroids, and Rituximab were started. Her platelets normalized, and her neurologic findings resolved. She was discharged on prednisone in stable condition.

Discussion:

TTP typically presents with severe hemolytic anemia and thrombocytopenia. However, not all patients with TTP are critically ill. Some present with mild symptoms. Neurologic findings are common, ranging from mild confusion and headache to seizures, strokes or coma. Additionally, there are rare case reports of patients presenting with recurrent stroke-like symptoms prior to developing hematologic abnormalities, similar to our patient.

Saturday Poster #10

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Zachary Pounders

Additional Authors: Christine Girard, MD; Raghavendra Kamath, MD, FACP; Miriam Levine, MD, FACP.

Untapped Potential: Diagnosis of Tuberculosis Peritonitis Confounded by Alcoholic Cirrhosis

Typically considered a disease of developing nations, patients in the developed world are also vulnerable to infection by *M. tuberculosis*, which due to its relative rarity and variable presentation can be mistaken for more common clinical entities. A 54-year-old male with a past medical history of alcohol abuse presented with complaints of generalized weakness and encephalopathy. Physical examination revealed cachexia and mild abdominal distension with ascites. CT demonstrated splenomegaly without hepatomegaly and a small amount of ascites. Chest X-ray was interpreted as normal. History was positive for a previous admission for spontaneous bacterial peritonitis in the context of cirrhotic liver disease with paracentesis revealing an exudative peritoneal fluid with a significant lymphocytic component. Paracentesis produced fluid of similar composition during this admission, prompting a wider differential diagnosis. Peritoneal fluid adenosine deaminase was negative. A QuantiFERON Gold was positive and acid-fast culture of peritoneal fluid grew *M. tuberculosis*. Diagnosis of peritoneal tuberculosis was made, and the patient now presented again to the hospital with a complaint of cough and chest X-ray findings suggesting miliary tuberculosis. The patient was isolated and anti-tuberculous therapy was initiated. While elevated levels of adenosine deaminase are suggestive of infection by *M. tuberculosis*, this lab result is frequently normal in patients who have underlying alcoholic cirrhosis. A high clinical suspicion for tuberculosis should be maintained by the internist when presented with a cirrhotic patient with lymphocytic predominant ascites, which may delay identification of *M. tuberculosis*, initiation of isolation and administration of anti-tuberculous therapy, all of which have implications as a public health hazard.

Saturday Poster #11

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Karim Saleb

Additional Authors: Karim Saleb, MD, Abdelkader Chaar, MD, Louis Saravolatz, MD, FIDSA

Unmasking Infective Endocarditis in a Patient with Spinal Epidural Abscess due to *Streptococcus gallolyticus*

Spinal epidural abscess (SEA) is a rare pyogenic infection located between the spinal dura mater and the vertebral periosteum; within the epidural space. *Streptococcus gallolyticus* is a rare cause of SEA. The occurrence of both infective endocarditis and SEA is also rare, with an estimated general incidence of 2.5%. We present an unusual case of SEA with *Streptococcus gallolyticus* bacteremia that unmasked infective endocarditis with no suggestive clinical signs.

An 81-year-old female with history of spinal stenosis, aortic valve replacement and adenocarcinoma of the sigmoid colon status post sigmoidectomy who presented with progressive low back pain radiating to the hip since a lumbar epidural steroid injection two weeks earlier. Review of systems was otherwise negative. Physical examination was remarkable for decreased muscle strength in the right lower extremity and midline lumbosacral tenderness. Lab investigations showed no leukocytosis, a marginally elevated CRP at 10.2. MRI of the lumbosacral spine showed an enhancing lesion with posterior cortical erosion at the L4 region consistent with an epidural abscess. Neurosurgery recommended no surgical intervention.

Blood cultures grew *Streptococcus gallolyticus*. Transesophageal echocardiogram showed a vegetation on the left aortic valve cusp. Treatment recommended was a 6-week course of ceftriaxone and hospital discharge occurred on day 7 without any neurologic sequelae. SEA is a rare but serious medical condition that requires prompt diagnosis and treatment to prevent progression of neurologic deficits. Our case demonstrates the importance of considering infective endocarditis as a possible source when *Streptococcus gallolyticus* is isolated, even without systemic symptoms.

Saturday Poster #12

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Sara Samaan

Additional Authors: Karim Saleb MD, Karthik Mekala MD, Antonious Attallah MD

Iliofemoral Thromboses and Bilateral Pulmonary Emboli in the Setting of May-Thurner Syndrome

Introduction: Iliac vein compression syndrome, or May-Thurner syndrome, becomes clinically significant when it causes deep vein thrombosis (DVT). We present a case of iliofemoral venous obstruction treated with mechanical thrombectomy and catheter-directed thrombolysis.

Case: A 21 year old morbidly obese female with chronic NuvaRing use and family history of homocysteinemia presented with acute left lower extremity pain and dyspnea. Physical examination revealed hypotension, tachypnea, tachycardia, and left lower extremity swelling and discoloration consistent with phlegmasia cerulea dolens. Initial labs were remarkable for leukocytosis and lactic acidosis. Chest CT angiography revealed acute bilateral pulmonary emboli and right ventricular strain, which was treated with ultrasound-guided catheter-directed thrombolysis. Venogram of the left lower extremity revealed thromboses in the left common femoral vein and great saphenous vein junction extending to the distal inferior vena cava (IVC). A Cook IVC filter was placed, followed by mechanical thrombectomy and clot retrieval using the FlowTrieve device. Pharmacologic catheter-directed thrombolysis was then administered from the IVC past the IVC filter to the left femoral vein. Finally, peripheral intravascular ultrasound revealed compression of the common femoral vein, consistent with May-Thurner syndrome, and a stent was placed in the iliac vein. The patient's symptoms resolved, and she was discharged on clopidogrel and warfarin.

Discussion: May-Thurner syndrome accounts for 5% of symptomatic lower extremity DVTs, caused by compression of the left iliac vein between the right common iliac artery and vertebral body. Endovascular procedures used to reduce thrombus burden include catheter-directed thrombolysis, mechanical thrombectomy, or a combination of both.

Saturday Poster #13

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Omama Siddiqui

Additional Authors: Dima Youssef, MD; Rebecca Witherell, MD; Ahmed Alrajjal, MD; Mohamad Zalt, MD; Veena Panthangi, MD; Mamta Sharma, MD

Mycobacterium shimoidei: A Rare Case of Cavitory Lung Disease

Mycobacterium shimoidei is a rare cause of cavitory lung disease. It is a slow-growing nontuberculous mycobacterium (NTM) that was first isolated in Japan in 1968. Only a few cases have been reported worldwide. We report, to our knowledge, the second case of *M. shimoidei* identified in the USA.

Case:

A 54-year-old female with past medical history of COPD and 20 pack year history of smoking was evaluated for progressive cough and worsening dyspnea of 2 months duration. On physical examination, she was afebrile with oxygen saturation of 95% on room air. Chest examination was unremarkable. The radiograph and computed tomography of the chest demonstrated a 6.4 x4.2 cm loculated left upper lobe cavitory lesion. She underwent endobronchial ultrasound guided biopsy of the lesion. Acid-fast bacilli (AFB) stains, bacterial cultures, and cytology were negative. Four weeks later, sputum and bronchoalveolar lavage AFB cultures grew *M. shimoidei*. Patient was started on amikacin, azithromycin, ethambutol, and rifampin based on susceptibility results with plans for close outpatient follow-up.

Discussion:

The clinical presentation of *M. shimoidei* mimics tuberculosis with features including a productive cough and weight loss. Previous cases have occurred in patients with underlying chronic lung disease who presented with a cough and were found to have a cavitory lung lesion on imaging. There are no established therapeutic guidelines and treatment is based on sensitivities. Clinicians should consider the possibility of NTM species causing cavitory lung disease. Increased recognition and understanding of *M. shimoidei* may facilitate in identifying risk factors, pathogenesis, and therapeutic options.

Saturday Poster #14

Category: Research

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Eugene Uh

Additional Authors: 1Eugene Uh, MD; 1Zachary Pounders, DO; 1Rajaninder Sharma, MD; 2; Jason Mouabbi, MD2; Colette Hicks, MA, BSN, RN, 2Tarik Hadid, M

Effectiveness of Low-Dose CT Lung Cancer Screening in the Community Setting

Introduction

The National Lung Cancer Screening Trial (NLST) reported 20% mortality reduction with the use of low dose computed tomography (LDCT) for lung cancer screening in high-risk individuals. We study the effectiveness of LDCT in the community setting.

Methods/Study design

Charts of subjects who underwent their first LDCT between 2013 and 2016 were reviewed. Statistical analysis was performed to compare to the results to the CT arm in NLST.

Results

The baseline characteristics of the subjects are significantly different between this study and NLST. LDCT in our study detected significantly higher positive findings. There are more cancers detected in this study compared to NLST CT and CXR arms, which could reflect higher incidence of cancer in this community or higher proportion of current smokers in our study. In this study, LDCT detected cancers at higher stages compared to that of the NLST CT arm but similar stages to NLST CXR arm. This may indicate that LDCT when performed in the community is less effective in detecting cancer at early stages.

Conclusions

The community population have different characteristics compared those enrolled in clinical trials. This may limit the generalizability of the results. Population-based studies are needed to confirm the results of the NLST

Saturday Poster #15

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Jose Zamora-Sifuentes

Additional Authors: Naveen Trehan, MD; Keith Bellovich, DO

Calcium Oxalate Crystal Nephropathy: A Perfect Storm

Acute kidney injury (AKI) in the hospital setting is a frequently encountered condition occurring in >4 million hospitalizations in the US yearly. A systematic approach including reviewing the urine sediment is essential to identifying the correct diagnosis. Although infrequent, crystal-nephropathy is a well described cause of AKI that may go undetected if ignoring this critical step in the diagnostic workup.

A 68-year-old male with no history of nephrolithiasis presents with lethargy after discharge from the hospital 9 days prior following treatment of acute diverticulitis managed with a 14-day course of amoxicillin-clavulanic acid. Laboratory workup revealed elevated BUN 58 mg/dL, creatinine 6.6 mg/dL (baseline ~0.9 mg/dL), bicarbonate 21 mmol/L, anion gap 15 mmol/L, phosphorus 8.0 mg/dL, FEUrea of 3.8%. Urinalysis showed pH 5, specific gravity 1.023. Microscopy showed hyaline casts and dumbbell-shaped calcium oxalate monohydrate crystals. Radiologic imaging was unremarkable. He was oliguric and fluid resuscitated using normal saline with dramatic improvement and return of baseline renal function.

Hyperoxaluria, hypercalciuria, acidic urine, low urine volume, and antibiotic exposure, are important risk factors for renal tubular crystal deposition and stone formation. It is likely that volume depletion and an altered gut microbiome predisposed our patient to the precipitation of calcium oxalate crystals damaging kidney parenchyma. Oxalate-nephropathy can occur from malabsorption, dietary changes, hereditary hyperoxaluria, or even ethylene glycol poisoning. Patients at risk of dehydration while on antibiotic therapy should be closely evaluated to identify risk factors that could contribute to crystal-nephropathy and nephrolithiasis. Aggressive hydration remains the cornerstone of treatment.

Saturday Poster #16

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Nikhil Gandhi

Additional Authors: Sandeep Sethi MD, Rajaninder Sharma MD

An Anomalous Connection Caused by Streptococcus Parasanguinis

The most common bacterial pathogen of aorto-atrial fistula (AAF) in infective endocarditis (IE) is staphylococcus (58%), streptococcus (28%), followed by enterococcus and polymicrobial organisms.¹ In a retrospective trial of 164 cases, 12 cases of IE were associated with the streptococcus viridians species with only one caused by Streptococcus parasanguinis.²

Case: A 63-year-old male with past medical history of aortic stenosis, gout presented to the hospital for malaise and knee pain. The patient had received outpatient antibiotics treatment from his PCP but continued to feel unwell. He complained of left knee pain, 7/10, radiating to his shin, exacerbated by movement and temporarily relieved with acetaminophen. He denied any trauma but endorsed knee arthroplasties. He was hemodynamically stable and physical exam was significant for a holosystolic murmur with a tender, swollen, erythematous knee. Arthrocentesis was performed on the knee and fluid analysis was negative for uric acid crystals but grew streptococcus parasanguinis. The blood cultures remained negative throughout. The synovial fluid culture was considered to be a contaminant. However, a new diastolic murmur was then noted on exam. Cardiology recommended trans-esophageal echocardiography which revealed an AAF. The patient was treated with ceftriaxone and gentamicin for infective endocarditis. Cardiothoracic surgery performed an aortic valve replacement with patch repair. Unfortunately, the patient had postoperative complications and expired.

Discussion: IE causing AAF's leads to high complication rates with more than 60% developing heart failure and 40% ending in death even with treatment. Surgery also increases mortality so earlier treatment provides the best prognosis.³

Saturday Poster #17

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: George Gennaoui

Additional Authors: Dr. George Gennaoui D.O., Josephine Dhar M.D., FACP Internal Medicine, Ascension St. John Hospital, Grosse Pointe Woods, MI

Limbic Encephalitis with Status Epilepticus - A Rare Presentation of Sarcoid

Neurosarcoidosis is notoriously difficult to diagnose, can occur in isolation with variable CT and MRI findings, and can masquerade as other diseases. We present a case of neurosarcoidosis presenting as limbic encephalitis.

Case: A 53-year-old previously healthy, African American female with recent progressive neurological symptoms presented with status epilepticus. Family reported worsening headaches, progressive amnesia, fatigue, and black outs over the past eight months. On presentation, vitals were normal. CBC and CMP were unremarkable. CT head showed left temporal lobe infarct and brain MRI showed left temporal lobe edema with dural enhancement. EEG showed diffuse severe encephalopathy with focal non-convulsive status epilepticus emanating from the left occipital region. Cerebrospinal fluid examination revealed pleocytosis with elevated protein and ACE levels. Patient was diagnosed with limbic encephalitis and treated with levetiracetam, lacosamide, ketamine drip, IVIG, and high dose steroids. Serum testing showed ANA 1:80, normal ACE, +RNP, +SSA, +CCP, and polyclonal gammopathy. Syphilis screening, Voltage-Gated Potassium Channel (VGKC)Ab, Glutamic Acid Decarboxylase, anti-DNA, anti-smith, RF, Scl70, p-ANCA and c-ANCA were notably negative. Chest CT showed bilateral pulmonary hilar adenopathy. Transbronchial biopsy showed granulomatous inflammation and a diagnosis of neurosarcoidosis was made. Seizures stopped after pulse corticosteroid therapy. The patient recovered with only mild memory deficit and was discharged on prednisone 60 mg/d.

Discussion: Although Neurosarcoidosis is rare, it should be suspected in non-elderly African American females presenting with neurologic symptoms as a delay in diagnosis and treatment can lead to adverse outcomes. Histology of any tissue showing noncaseating granulomas is essential for diagnosis.

Saturday Poster #18

Category: Clinical Vignette

Program: Ascension St. John Hospital

Program Director: Raymond Hilu, MD, FACP

Presenter: Mohammed Hamdi

Additional Authors: Suman Kaza MD and Michael Yacoub MD, FACP

Macrocytic Anemia and Pulmonary Emboli? Think 'Pernicious Emboli'

Introduction: Physicians, early in their clinical training, are taught to recognize patterns. We present the association of vitamin B12 deficiency with pulmonary arterial thromboembolism. Vitamin B12 deficiency can produce elevated homocysteine levels, which is a risk factor for cardiovascular and cerebrovascular disease, venous thromboembolic disease, and obstetric complications; the latter interferes with activation of factor Va, by increasing levels of protein C, as well as increasing the expression of tissue factor and suppressing sulfate heparin, an endogenous anticoagulant.

Case Presentation: A 75-year-old male presented with NYHA class IV dyspnea and chest pain. EKG showed T-wave inversions in the anterolateral leads. A stress echocardiogram revealed a severely enlarged right ventricle. A subsequent thoracic CTA showed large, bilateral pulmonary emboli with an RV/LV ratio of 1.5. Venous doppler ultrasound demonstrated bilateral lower extremity thrombi. He underwent prompt and successful thrombofragmentation and thrombolysis in situ. Megaloblastic anemia (Hgb of 10.4 with MCV of 109.1), initially suspected to be unrelated, was further investigated. Serum cobalamin levels were undetectable, leading to the discovery of marked hyperhomocysteinemia (49.7). He was discharged on rivaroxaban and sublingual vitamin B12.

Discussion: An association of recurrent VTE with hyperhomocysteinemia is less common, but well known. However, as this case demonstrates, we suggest clinicians be mindful that vitamin B12 deficiency is associated with hyperhomocysteinemia; and this can ultimately lead to fatal thromboembolic events. Our patient did not have any risk factor for VTE until we discovered his thrombophilic state associated with cobalamin deficiency.

Saturday Poster #19

Category: Clinical Vignette

Program: Beaumont Hospital – Dearborn

Program Director: Ruaa Elteriefi, MD, FACP

Presenter: Asadullah Mahmood

Additional Authors: Majd Faraj,BS, Musa Faisal, MD

Amyloidosis Presentation with Gastrointestinal Involvement: A Case Report

Background: Amyloidosis is the deposition of insoluble fibrils in the extracellular matrix in various organs in the body. Having a complicated and non-specific prognosis, Amyloidosis is a serious and rare condition whose misdiagnosis is rather common. Patients with Amyloidosis usually present with renal involvement, weight loss, and weakness. We present a patient who presented with chronic diarrhea as his main complaint and was diagnosed with Amyloidosis.

Case Presentation: A 78- year-old Caucasian man presented with chronic diarrhea and weight loss for the past few months. Patient's blood work revealed an abnormally low ratio of Kappa/Lambda free light chain and had a positive Congo red stain of several GI tract biopsies which validated the diagnosis of primary light chain amyloidosis. The patient was treated following the National Comprehensive Cancer Center Network's (NCCN) guideline and had a remarkably quick response to the therapy after finishing the first cycle of treatment whereby his diarrhea was resolved.

Conclusion: This case report shows that chronic diarrhea can be a less common symptom suggestive of Amyloidosis in the absence of other obvious causes and it suggests maintaining this diagnosis as part of the differential when handling patients with similar presentations.

Saturday Poster #20

Category: Clinical Vignette

Program: Beaumont Hospital – Dearborn

Program Director: Ruaa Elteriefi, MD, FACP

Presenter: Raai Mahmood

Additional Authors: saeed N;Al-bana K ;Sawah A;pooja M ;parpia H ;sanstrum J ;Eljak A

Hypophysitis Mystery: Diagnostic Delimma of Neurosarcoid

Hypophysitis referes to inflammation of the pituitary gland and/or infundibulum. It can be primary (xanthomatous, lymphocytic) or secondary (TB, neurosarcoidosis, syphilis&autoimmune disorders).Neurosarcoidosis presents a diagnostic dilemma especially in the absence of extraneural involvement.

We present a case of 52y f with PMH of hypertension,stroke and hypothyroidism presented with 10 months hx of extensive polyuria and polydipsia,vitally stable.Blood work showed normal serum Na with low urine osmolality at 161.Water depravation test showed low urine osmolality as well but after ADH administration urine osmolality increased from 164 to 468 and central diabetes insipidus was diagnosed.Further workup including Brain MRI revealed thickening of pituitary infundibulum and leptomenigeal enhancement,her LP showed high protein, high IgG and lymphocytic predominance.her Quantiferon was also positive(at this point DDX was limited to TB and neurosarcoidosis other etiologies including autoimmune and tumor causes were excluded) but given absence of extraneural signs of sarcoid and normal ACE level and her proven exposure to TB presumptive diagnosis of TB was made however despite 9 months of anti-TB therapy LP and MRI failed to show improvement and neurosarcoid became the leading diagnosis. To date patient is undergoing preparation for brain/meningeal biopsy.

We concluded that Early diagnosis and immunosuppression for isolated neurosarcoidosis is the key in improving clinical outcomes. MRI and LP can guide us towards patients in whom an empiric trial of steroids is appropriate however in certain occasions and despite the risks associated with brain biopsy it might be necessary to prove neurosarcoid especially in the absence of extraneural tissue.

Saturday Poster #21

Category: Clinical Vignette

Program: Beaumont Hospital – Dearborn

Program Director: Ruaa Elteriefi, MD, FACP

Presenter: Solomiia Savedchuk

Additional Authors: Adrian Michel MD, Lisa Cohen MD

Severe Rhabdomyolysis in a Patient with Acute Hepatitis A

Acute hepatitis A is associated with a variety of extrahepatic complications. We report a case of a severe rhabdomyolysis requiring temporary hemodialysis in a patient with acute hepatitis A.

A 72-year-old male presented with diffuse body pains, muscle weakness, and right lower extremity cellulitis. He reported generalized pain and weakness to the point he could barely get out of bed. Additionally, he had chills, nausea and vomiting. Past medical history included hypertension, diabetes, heart failure (EF 30 %), CKD stage 3 (baseline creatinine 1.3 mg/dl). Physical exam with decreased strength all over with preserved reflexes, epigastric tenderness, no rash, no synovitis. On admission, he was noted to have mild leukocytosis, creatinine of 1.5 mg/dl, AST 492, ALT 144, urinalysis showed blood without erythrocytes. CK was 99,000. ESR was 106, CRP was 30. Patient denied any history of trauma, intense physical activity, recreational drugs, alcohol, insect/snake bites, or travel. There was no recent changes to his medications, he has been on Lipitor 10 mg for 4 years. Viral work up was positive for anti-hepatitis A Ig M. TSH was normal, anti Jo1 antibody was negative. His creatinine and CK continued to trend up reaching a peak at 160,000 on day 7 of admission. Despite IV fluids, he became oliguric, hyperkalemic with signs of volume overload and required temporary hemodialysis.

This case demonstrates that hepatitis A can be very severe, resulting in rhabdomyolysis.

Saturday Poster #22

Category: Clinical Vignette

Program: Beaumont Hospital – Dearborn

Program Director: Ruaa Elteriefi, MD, FACP

Presenter: Gustavo Tataje Rengifo

Additional Authors: Al-Banaa, Kadhim, MD; Herisinazhad, Leyla, MD; Bangash, Rabia, MD; El Masri, Dana, RPh; John, Rajiv, MD;

Reversible Posterior Leukoencephalopathy Syndrome Induced by Pazopanib Therapy

Introduction

Reversible posterior leukoencephalopathy syndrome (RPLS) is a clinical-radiologic syndrome characterized by reversible cortical dysfunction involving the occipital lobes in conjunction with typical magnetic resonance imaging (MRI) findings. Pazopanib is a new Chemotherapeutic agent targeting vascular endothelial growth factor receptor (VEGF) and platelet-derived growth factor receptor (PDGF) approved for the treatment of advanced renal cell carcinoma. Until now, only one case of RPLS induced by pazopanib has been reported.

Case presentation

A 66-year-old female with Known diagnosis hypertension and metastatic renal cell carcinoma who recently started on pazopanib. Presented with Confusion, Bilateral vision impairment, headache, and new onset seizure. MRI of the brain revealed bilateral subcortical edema at the occipital lobes consistent with the diagnosis of RPLS without evidence of brain metastasis or stroke.

She was treated with anticonvulsants along with blood pressure control. Her symptoms Improved on day 4 after withholding pazopanib and were subsequently discharged.

Discussion

The toxicity profile of Pazopanib mainly consists of diarrhea, hypertension, nausea, and fatigue.

Pazopanib has strong antiangiogenic properties, vascular endothelium may be an important site of toxicity. In the presence of underlying endothelial dysfunction, the acute increase in blood pressure caused by pazopanib may exceed the protective autoregulatory mechanisms, which can result in extravasation of fluids into the brain parenchyma. The posterior brain circulation is more vulnerable to changes in blood pressure.

Conclusion

RPLS can be life-threatening if left untreated. Physicians should be aware of this condition, especially in susceptible population as in hypertensive patients.

Saturday Poster #23

Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Olivia Allen

Additional Authors: Solomia Savedchuk, MD, Zahra Khaled MD, Adam Hafeez, MD, Sara Karnib, MD, Sami Zarouk, MD

Pericardial Effusion in a Kidney Transplant Patient with Autosomal Dominant Polycystic Kidney Disease

Pericardial effusion (PE) can occur in up to 35% of Autosomal Dominant Polycystic Kidney Disease (ADPKD) patients. It typically follows a benign course and does not require aggressive workup and management. Occurrence of PE after kidney transplantation may, however, pose a diagnostic challenge given the health status of these patients. We report a case of an ADPKD patient who developed a PE after kidney transplantation with recurrent asymptomatic episodes over the course of 8 years.

A 60 year old female with a 10 year history of cadaveric renal transplant due to ADPKD, with CKD IV, recurrent asymptomatic pericardial effusion. She had previously undergone extensive work up including pericardiocentesis for asymptomatic effusion with fluid studies showing bloody effusion with negative cultures and cytology. In her cardiothoracic surgeon's office, she was tachycardic in the 150s and was sent to the emergency department for further evaluation. An echocardiogram showed a moderate to large pericardial effusion with hyperdynamic right atrium and ventricle, suggestive of mild hemodynamic compromise. A right heart catheterization demonstrated normal right heart pressures and no blunting of the Y descent on pressure tracings. Our patient remained asymptomatic and was ultimately discharged. Our case demonstrates a pericardial effusion due to ADPCKD even after renal transplant. Additionally, these patients may have normal right heart pressures confirmed on catheterization despite concerning echocardiographic findings. A lack of symptoms and the chronic nature of the effusion may be a clue to its benign nature.

Saturday Poster #24

Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Madhupreet Kaur

Additional Authors: Alexandra Halalau, M.D. and Abhishek Swami, M.D. (both are faculty)

Atypical HUS Caused by Interferon Beta Therapy

Interferon beta therapy (IFN β), an immunomodulatory agent used for treatment of multiple sclerosis (MS), has been linked to thrombotic microangiopathies (TMA) such as atypical hemolytic uremic syndrome (aHUS) in 10 previous case reports. A 61 y/o male with history of essential thrombocythemia (ET), chronic lymphocytic leukemia (CLL) and multiple sclerosis (MS), being treated with IFN β , presented with bilateral lower extremity swelling. Upon presentation, he was hypertensive at 172/61mm Hg. Labs revealed hemoglobin of 8.7g/dl, platelets of 192, LDH of 963 and creatinine elevated at 2.70(baseline 1.40). Urinary studies suggested nephritic syndrome. Additional work up showed 3-5 schistocytes and haptoglobin <8. Diagnosis of TMA was suspected despite of normal platelet count because of the relative decline from a baseline of 500. Kidney biopsy showed active TMA. IFN β was held. Complement 3 level was reduced at 72 and aHUS was considered once ADAMTS13 was negative. He was treated with eculizumab for a year. Kidney function stabilized and repeat biopsy showed resolution of active TMA. This case is unique due to presence of an unusual combination of diseases in one patient such as ET, CLL and MS, now presenting with additional rare disorder of TMA. Thrombocytopenia is essential component in the diagnosis of TMA, however in this patient, platelets were normal due to existing ET, making the diagnosis difficult. The case highlights TMA as a rare side effect of INF β treatment and the need for high index of suspicion even if platelet count is normal.

Saturday Poster #25

Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Beatrice Lai

Additional Authors: Filip Ionescu, Markie Zimmer, Mohammad Chisti

The Case of Unstoppable Clotting Cascade: Failure of Multiple Anticoagulation Agents in the Setting of Malignancy

It is well known that malignancy is a hypercoagulable state, and that patients with malignancy are at increased risk for both venous and arterial thromboses due to their underlying oncologic process. Commonly, patients will be initiated on prophylactic drugs to prevent such devastating consequences. We report on a case of a young female with metastatic ovarian cancer who failed rivaroxaban, warfarin, enoxaparin, fondaparinux in conjunction with anti-platelet agents. Our patient tested negative for antiphospholipid antibodies when she first presented. Failure with each line of anti-coagulant therapy led to unfortunate outcomes such as deep vein thrombosis, pulmonary embolism, cerebral vascular accident, multi-organ infarct, left ventricular thrombus, inferior vena cava thrombus which prompted a shift to a different line of therapy. There remained a high clinical suspicion for antiphospholipid syndrome after failure of multiple anticoagulation therapies, so a confirmatory test was done; the hexagonal phase phospholipid test was equivocal for our patient. Ultimately, our patient did not respond to first- or second-line chemotherapy and she had significant progression of her cancer on computed tomography imaging and by tumor marker monitoring. She also exhausted all options for anticoagulation agents with significant clot burden in both her arterial and venous systems. Our patient eventually opted to pursue palliative and hospice care. This case report is an example of two very hypercoagulable states – genitourinary malignancy and possible catastrophic antiphospholipid syndrome.

Saturday Poster #26

Category: Research

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Emily Langnas

Additional Authors: Kanav Gupta M.D., Zahra Khaled M.D., Travis Tagami D.O., Alexandra Halalau M.D. F.A.C.P.

Assessment of the Guideline Recommended Anticoagulation Rates for Atrial Fibrillation in an Outpatient Resident Clinic

Introduction: Atrial fibrillation is one of the most common arrhythmias and can increase patients' risk for embolic stroke. Current guidelines recommend utilizing the CHADS₂VASc risk score to stratify patients based on their prior cardiovascular history and determine their annual stroke risk. If this value is greater than or equal to 2 then anticoagulation is recommended. The main objective is to assess the anticoagulation rates in patients with atrial fibrillation in the Beaumont Outpatient Internal Medicine Resident Clinic.

Methods: In this retrospective study, all patients >18 years of age who had at least one encounter in the resident clinic over a five year period (January 2014-December 2018) with the diagnosis of atrial fibrillation and not on anticoagulation had their CHADS₂VASc score calculated.

Results: 10,486 patients had an encounter in the clinics during our study period. 688 (6.6%) of our study population had a diagnosis of atrial fibrillation, of which 361 (52.5%) were not on anticoagulation. The results indicate that 290 out of 361 eligible patients, or roughly 80.3%, have a CHADS₂VASc score of 2 or greater.

Conclusion: Evidently, a significant portion of patients in the Beaumont Resident Clinic with a diagnosis of atrial fibrillation who are not on anticoagulation may qualify for it. This is much higher than the nationwide estimate of approximately 50% of patients who require anticoagulation and are not prescribed it. Using this data, we implemented an intervention to address this issue in our clinic.

Saturday Poster #27

Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Marina Maraskine

Additional Authors: Ramy Mando, Julian Barbat

Blinded by the Heart

Papillary fibroelastoma's are a rare pedunculated cardiac valve tumor recognized as a risk factor for embolic phenomenon leading to stroke and/or myocardial infarction. We present the case of a 51-year-old male with a past medical history of prior cerebrovascular accident, splenic infarct, type II diabetes, and left retinal detachment who presented to the emergency department with acute onset left eye vision loss and headache after normal evaluation by his retina specialist. CT head showed subacute infarct in the right occipital lobe. MRI demonstrated acute infarct of the right posterior parasagittal parietal lobe. MRA carotid was negative for stenosis or vascular injury. Trans thoracic echocardiogram obtained due to concern for embolic source with recurrent history of prior stroke and splenic infarcts. It demonstrated a mass on the aortic valve consistent with fibroelastoma. Deemed the likely source of the recurrent embolic event's surgical intervention with aortic valve replacement was recommended and pathology confirmed the diagnosis of papillary fibroelastoma of the aortic valve as well as lambl's excrescences which are also higher in prevalence in patients with recent stroke. Fibroelastoma's are most commonly detected by transesophageal echocardiography due to their sub centimeter size. Embolization of tumor pieces or of thrombus can occur. This case illustrates the presentation and identification of a rare benign cardiac tumor, fibroelastoma, along with recommended treatment to prevent future catastrophic embolic events.

Saturday Poster #28

Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Corey Mayer

Additional Authors: Correy Mayer, Inayat Gill, Matthew Sims

Costochondral Osteomyelitis? Think Again

A healthy 44-year old female presented to the ED for right chest wall discomfort. She had seen a physiatrist and received a steroid injection of the right first costochondral joint which worsened her symptoms. She was afebrile with normal vitals. Examination revealed right anterior chest wall tenderness over the right first costochondral joint. She had leukocytosis, but an elevated CRP of 114 mg/L (normal 0.8 mg/L). CT scan of the neck and chest was concerning for chest wall cellulitis, mediastinitis and possible osteomyelitis with abscess formation behind the right first costochondral joint. Infectious disease consultation recommended six weeks of vancomycin and ertapenem, and she was discharged. At 2 weeks, she complained of fevers, night sweats and right neck swelling. She returned to the ED with tachycardia and a temperature of 102.9F. Labs revealed a WBC of 2.6 bil/L (normal 3.3-10.7 bil/L) and a CRP of 34.5 mg/L. Neck CT revealed an increase in the right-sided cervical lymphadenopathy. She was admitted and started on vancomycin and meropenem. Fevers and neck discomfort continued. Without response to antibiotics, an excisional lymph node biopsy was performed. Her fevers, symptoms and leukopenia resolved. Histopathology revealed histiocytic necrotizing lymphadenitis, consistent with Kikuchi-Fujimoto disease. This patient illustrates the importance of investigation non-infectious causes in patients with suspected osteomyelitis, even when imaging findings might suggest an infectious process, especially when cervical adenitis is present and there is a lack of response to antibiotics.

Saturday Poster #29

Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Syed Mustsafa

Additional Authors: Abdalla Kara Balla, MD., Zahra Nur Khaled, MD., Alexandra Halalau, MD.

Diagnostic Challenge in Cardiac Sarcoidosis

Cardiac involvement manifests clinically in about 5% of patients with sarcoidosis. Diagnosis is challenging due to the low yield of endomyocardial biopsy and limited accuracy of clinical criteria. Cardiac Magnetic Resonance Imaging (CMR) has emerged as a useful diagnostic tool with high reported sensitivity. We present a patient with new onset heart failure with CMR negative for sarcoidosis.

49-year-old African American male presented with shortness of breath, orthopnea, fatigue and weight loss. He had diffuse lymphadenopathy, lower extremity edema, distended JVD and pulmonary crackles on exam. EKG showed sinus rhythm with right bundle branch block. BNP was 3338 pg/mL and echocardiogram revealed ejection fraction of 15% with global hypokinesis. Chest CT revealed bilateral hilar adenopathy, diffuse micronodules, pleural effusions and mass like consolidation of the left lung apex. CMR showed reduced ejection fraction with no evidence of sarcoidosis imaging findings: fibrosis, scarring or late gadolinium enhancement. No coronary disease was seen on cardiac catheterization. Patient was started on goal directed therapy for heart failure. Supraclavicular lymph node biopsy revealed non-caseating granulomas consistent with sarcoidosis. Patient was lost to follow-up before treatment with steroids could be initiated.

As seen in our patient, CMR can miss the diagnosis of sarcoidosis. In cases with prominent extra-cardiac involvement, tissue diagnosis is helpful but isolated cardiac involvement might present a diagnostic challenge. PET scan may be useful in such cases and further research needs to be done to compare the diagnostic accuracy of CMR with PET, and to establish a better standardized diagnostic criterion.

Saturday Poster #30

Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Ehsun Naeem

Additional Authors: Syed Farrukh Mustafa MD., Adam Hafeez MD., Abhishek Swami MD.

Concomitant ANCA Vasculitis and Membranous Glomerulonephritis in a Patient with Acute Renal Failure

Co-existent antineutrophil cytoplasmic antibody-associated Crescentic Glomerulonephritis (ANCA-GN) and Membranous Nephropathy (MN) is a rare occurrence. We present a patient with acute on chronic renal failure secondary to both disease processes occurring simultaneously.

79-year-old male with history of hypertension and tobacco use presented with fatigue, shortness of breath, oliguria, anorexia and unintentional weight loss of 10 pounds in one month. His home medications were hydralazine, metoprolol and furosemide. On presentation blood pressure was elevated at 201/93. He had muscle wasting, elevated JVP and 2+ pitting edema on exam. Serum Cr and BUN were elevated at 7.55 mg/dL and BUN at 57 mg/dL respectively. His prior Cr was 1.2 mg/dL one year ago. Urine studies revealed hematuria and nephrotic range proteinuria with a protein/Cr ratio of 3.14. No red blood cell casts were seen. Serologic workup revealed positive P-ANCA and anti-myeloperoxidase antibodies. ANA, anti-GBM, HBV and HCV antibodies were negative. Kidney biopsy showed subepithelial and intramembranous electron dense immune deposits consistent with membranous glomerulonephritis as well as proliferative GN with extra-capillary crescents. Hemodialysis was initiated, and he was started on systemic steroids, rituximab and plasmapheresis. Symptoms improved with treatment, but he remains dialysis dependent.

Concomitant ANCA associated-GN and Membranous Nephropathy is an important diagnostic consideration in patients presenting with RPGN and nephrotic syndrome. The prognosis has been reported to be poor despite treatment with steroids and other immunosuppressants and most patients have progression to end stage renal disease requiring hemodialysis.

Saturday Poster #31

Category: Clinical Vignette

Program: Beaumont Hospital – Royal Oak

Program Director: Nancy Crossley, MD, Member

Presenter: Anuja Shikhare

Additional Authors: James Lim, Alexandra Halalau, Brett Holmes

Atypical Presentation of Clostridium difficile Infection

The absence of diarrhea is an atypical presentation of Clostridium difficile infection which can delay diagnosis and lead to poor outcomes.

An 81-year-old female presented with altered mental status and watery stools for two days. She was recently treated with antibiotics for urinary tract infection and suspected pneumonia. Initial workup showed leukocytosis, elevated pro-calcitonin, and lung opacities. She was started on treatment for healthcare associated pneumonia. Initial abdomen / pelvis computerized tomography (CT) showed large amount of stool with recto-sigmoid wall thickening without obstruction. Patient did not have bowel movement for 2 days after admission and was started on a bowel regimen. She showed initial improvement in mental status, but then developed abdominal pain. Abdominal film showed ileus and a nasogastric tube was placed for decompression. On repeat CT, there was recto-sigmoid colon dilatation despite bowel regimen and nasogastric tube decompression. Decompressive flexible sigmoidoscopy was done 2 weeks after admission and yielded stool positive for C. difficile toxin. Oral Vancomycin and intravenous metronidazole were started. Unfortunately, she continued to decline and she was transferred to inpatient hospice 5 days after the C. diff treatment was initiated.

This represents a case of C. difficile infection in which diagnosis was delayed secondary to ileus and absence of diarrhea. System factors, which are in place to prevent undue testing, discourage or prevent testing of C. difficile toxin in absence of active diarrhea. Rectal swab for diagnosis and empiric treatment should be considered in such cases with high index of suspicion.

Saturday Poster #32

Category: Research

Program: Beaumont Hospital – Royal Oak

Program Director: Sandor Shoichet, MD, FACP

Presenter: Priscilla Sigua Arce

Additional Authors: Ramy Mando, M.D., Lisa Spencer B.S., Alexandra Halalau M.D.

A Retrospective Analysis of the Treatment and Complications Related to May-Thurner Syndrome

A retrospective chart review of 47 patients with May-Thurner Syndrome (MTS), across eight hospitals, was completed. Baseline characteristics and outcomes of interest included: choice of management, treatment duration, treatment-related complications, frequency of post-thrombotic syndrome, major bleed, 30-day readmission, and mortality.

Of the 47 patients identified as having “MTS”, 32 (70%) were diagnosed formally with either magnetic resonance venography, computed tomography or ultrasound. Two patients were excluded for insufficient availability of follow-up. Mean age of the population included (n=30) was 50.24 +15.33 years and 83% (n=25) had female gender. The majority (30%) of patients were treated with anticoagulation, thrombolysis and stent placement. 23.3% received a combination of anticoagulation, antiplatelet agent, thrombolysis and stent placement. Overall, we found 28 patients (93%) underwent endovascular stenting. However, the 36.7% (11/28) stent-related complication rate included stent thrombosis, stenosis, and migration. One patient underwent open heart surgery for stent retrieval. Duration of therapy ranged from 6 months to lifelong treatment. Two patients (6.7%) suffered major bleed requiring transfusion. Nine patients (30%) developed post-thrombotic syndrome. Seven (23.3%) patients required MTS related readmission within 30 days. No mortality was noted at 3-year follow up.

Although our study only included 30 patients, it was evident to us that there is no consensus in the practice of managing MTS. Furthermore, endovascular stenting may pose more harm than benefit with stent-related complication rates hovering close to 40%. Further research is needed to help develop a standardized evidence-based approach in the management of MTS that ensures patient safety.

Saturday Poster #33

Category: Clinical Vignette

Program: Central Michigan University - Saginaw

Program Director: Nicholas Haddad, MD, FACP

Presenter: Albert Linden

Additional Authors: Binu Malhotra

A Case of Stage IV Metastatic Melanoma Successfully Treated with Nivolumab Despite a Prior Liver Transplant

A 76yo Caucasian male, with history of liver transplant 15 years previously, developed a lesion on his right cheek in April 2015. Biopsy was positive for melanoma, BRAF V600E/K negative and Kit negative. Lymph node dissection was negative for metastases, and he underwent wide local excision. However, in March 2016 new nodules in his neck appeared, and CT revealed metastases in the liver and spleen. He began treatment with dacarbazine, but after only 3 cycles his disease progressed.

Traditionally, cancer immunotherapy was avoided in transplant recipients due to the possibility of triggering transplant rejection and liver failure. However, due to the failure of chemotherapy in this case, it was decided to trial nivolumab as salvage therapy.

His doses of tacrolimus and azathioprine were reduced, and he began nivolumab in July 2016. After only 5 weeks on nivolumab, CT imaging showed nearly 50% reduction in size of the metastatic lesions. He was maintained on nivolumab until November 2017, when he developed grade 3 diarrhea and ulcerative colitis. The metastases continued to decrease in size until August 2018, when they were no longer visible on CT. Despite no therapy since November 2017, his staging CT scans continue to show no disease, most recently confirmed in April 2019.

Review of the literature shows that cancer immunotherapy has been demonstrated to cause rejection in transplant recipients, with one recent study showing 4 of 14 patients experiencing transplant rejection. However, immunotherapy does have utility as salvage therapy, with the potential for curative effect.

Saturday Poster #34

Category: Clinical Vignette

Program: Central Michigan University - Saginaw

Program Director: Nicholas Haddad, MD, FACP

Presenter: Zhilwan Rahim

Additional Authors: Del DeHart, MD, FACP, FIDSA

Mesalamine Suppository for Back Pain?

A 48 year-old women battling severe low back pain and worsening shortness of breath for multiple weeks was admitted to our facility. Had an established diagnosis of CD that was well controlled on adalimumab, however, had missed many doses due to recent illness. Workup revealed bilateral pneumonia, and proctitis on CT of the abdomen and pelvis. Physical exam revealed a nondistended soft abdomen with active bowel sounds and mild lower abdominal tenderness. Despite broad-spectrum antibiotics to cover the pneumonia and what was thought to be infectious proctitis, the patient continued to have debilitating low back pain. Her requirement for intravenous pain medications increased daily. One week prior to presentation, she was admitted to another facility for her back pain and had an unrevealing extensive workup. On day three of hospitalization the patient was started on mesalamine suppositories with significant alleviation in her back pain. Patient did well and eventually discharged home. Outpatient colonoscopy supported the suspicion of a CD flare.

Classic signs and symptoms of active CD include abdominal pain, diarrhea, fatigue, and fever. The clinical patterns are roughly reported as one-third ileal, ileocolonic, or colonic disease. Of the cases limited to colitis, one-half typically spare the rectum. The predominately referred back pain and very little abdominal discomfort made our case even more interesting. Pattern recognition is valuable and imperative to practicing medicine. However, this case highlights the importance of looking beyond the patterns and expected findings when treating our patients at bedside.

Saturday Poster #35

Category: Clinical Vignette

Program: Central Michigan University - Saginaw

Program Director: Nicholas Haddad, MD, FACP

Presenter: Khine Mon Swe

Additional Authors: Vivek Variar

Nesidioblastosis: Endogenous Hyperinsulinemic Hypoglycemia but Not Insulinoma

Nesidioblastosis is a rare disorder of endocrine pancreas causing hyperplasia of beta islet cells throughout the pancreas. Etiology is unknown. It is found to be associated with a number of genetic abnormalities and post gastric bypass surgery. The incidence of nesidioblastosis in adults is very low. Here, we present a case of persistent hyperinsulinemic hypoglycemia secondary to nesidioblastosis following Roux-en-Y gastric bypass surgery.

Our patient is a 73-year-old gentleman with the past medical history of duodenal ulcers status-post Roux-en-Y bypass surgery in 1980, adenocarcinoma of the lung, prostate cancer, and pulmonary embolism. He presented with multiple episodes of postprandial asymptomatic hypoglycemia within 2-3 hours of the meal. Laboratory findings showed inappropriately increased insulin, proinsulin and C peptide at the same time of low blood glucose, which was consistent with endogenous hyperinsulinemia. Serum sulfonylurea screen was negative at the same time. CT scan of the abdomen with contrast was negative for pancreatic mass. Further investigation showed normal serum cortisol, thyroid function test, ACTH stimulation test and insulin-like growth factor 2 (IGF 2) level. Our patient has been started on Acarbose and dietary modification with restriction of complex carbohydrate and have added protein and fat to the diet. Currently, our patient's condition has been controlled with medical management.

The majority of hyperinsulinemic hypoglycemia cases in adults are caused by insulinoma and only less than 5% are caused by nesidioblastosis. Acarbose, octreotide, verapamil, and diazoxide can be used to improve hypoglycemic symptoms. Subtotal distal pancreatectomy can be beneficial in severe and refractory cases.

Saturday Poster #36

Category: Clinical Vignette

Program: Central Michigan University - Saginaw

Program Director: Nicholas Haddad, MD, FACP

Presenter: Brett Vander Baan

Additional Authors: Asim Kichloo, MD; Yasmeen Mann MS3

Diabetic Muscle Infarction: A Rare Cause of Leg Pain

Diabetic muscle infarction is a condition that is often under-diagnosed. It is characterized by myonecrosis and edema secondary to microvascular complications of longstanding diabetes mellitus that can result in compartment syndrome or secondary infections.

The patient is a 55 year old African American female with past medical history significant for uncontrolled type 2 diabetes mellitus, ESRD compliant with peritoneal dialysis for 2 years with recent peritoneal equilibration test showing good membrane function, diastolic heart failure with preserved ejection fraction, and hypertension who presented with chief complaint of crampy left leg pain with passive flexion and extension without history of trauma. Some swelling and warmth of leg was noted without associated numbness, weakness, or sensory loss. Given the swelling and pain, deep vein thrombosis was of concern however doppler studies were negative. Pain was out of proportion to physical exam findings so developing compartment syndrome was concerning. After laboratory evaluation the patient was found to have no significant electrolyte abnormalities, mild uremia and elevated CK of 525 and ESR of 108. MRI showed diffuse edema of rectus femoris with findings of infarction versus myositis. Given the clinical presentation without symptoms of myositis and no infectious signs, diagnosis of diabetic muscle infarction was made. Treatment was initiated with NSAID therapy, rest, and tight glycemic control.

Diabetic muscle infarction is a rare but likely underdiagnosed complication of uncontrolled diabetes. This case demonstrates the importance of early recognition of the condition to prevent development of compartment syndrome due to associated muscle swelling.

Saturday Poster #37

Category: Clinical Vignette

Program: Central Michigan University - Saginaw

Program Director: Nicholas Haddad, MD, FACP

Presenter: Navya Sree Vipparla

Additional Authors: Phoo Pwint Nandar, MD; Rajeev Sudhakar, MD2; Naveed Akhtar, MD2

Ebstein's Anomaly and Longevity: Oldest Known Survivor in the Modern Era

Ebstein's anomaly (EA) is a rare congenital heart malformation with incidence of about 1 in 20,000 live births accounting for 0.5% of all congenital cardiac malformations. In its natural course, only 5% of patients survive beyond the fifth decade.

A 97-year-old female with medical history of well controlled congestive heart failure and hypertension was admitted for fever and Supraventricular Tachycardia (SVT). Initial Echocardiogram (EKG) revealed AV nodal re-entrant tachycardia. Troponin had a flat trend around 0.2. Serology was positive for Respiratory Syncytial Virus. Transthoracic echocardiogram showed left ventricular ejection fraction of 50% with massively dilated right atrium, severe tricuspid regurgitation, and moderately enlarged right ventricle systolic function. Also, septal paradox was noted, and bubble study was positive. There was displacement of septal tricuspid leaflet to the apex of >8mm with reference to mitral valve, highly suggestive of Ebstein anomaly. SVT resolved spontaneously after fever was controlled. Repeat EKG 10 hours later showed sinus rhythm with occasional Premature Atrial Complexes. No further invasive work up was performed, medical management with close monitoring was chosen given her age.

Asymptomatic survivors of EA over 7 decades are only a handful. In rare instances, patients live more than 70 years, our patient diagnosed at age 97-years, to our knowledge is the oldest reported case in the literature so far increasing the known longevity of the condition.

Saturday Poster #38

Category: Clinical Vignette

Program: Henry Ford Health System – Detroit

Program Director: Odaliz Abreau Lanfranco, MD, FACP

Presenter: Georgi Fram

Additional Authors: Sachin Gandhi MD, William Keimig MD

An Unusual Presentation of Neurosyphilis in a Primary Care Setting

A 42-year-old male presented to the clinic with a chief complaint of sudden onset blurry vision for one month without improvement. The patient had no major medical history and had no prior need for corrective lenses. The patient had no other focal neurologic deficits. He was referred to the ophthalmology clinic for further evaluation. Anterior uveitis was appreciated, and lab findings revealed a positive treponemal antibody and positive RPR testing. The patient denied any prior history of risky sexual behavior, ulceration of his genitals, or any unusual rash; however, his significant other had admitted to being unfaithful approximately 10-12 years prior, unbeknownst to the patient. Upon further testing, the patient's significant other also was positive for RPR at a titer of 1:128.

The patient was admitted to the hospital for inpatient treatment of neurosyphilis. Further testing was conducted, including HIV, hepatitis, and STI screening, all of which were unremarkable. A lumbar puncture was performed which was negative for VDRL. The patient was initiated on IV penicillin and was able to be discharged in stable condition 48 hours after admission. The patient was sent home with a PICC line and completed a 2-week course of IV penicillin. On follow-up, the patient's RPR titers have decreased to 1:16, demonstrating appropriate response to treatment.

Neurosyphilis presenting as anterior uveitis is an exceedingly rare presentation, and often is misdiagnosed on initial presentation. High clinical suspicion and appropriate testing are vital as ocular syphilis may worsen when treated inappropriately.

Saturday Poster #39

Category: Clinical Vignette

Program: Henry Ford Health System – Detroit

Program Director: Odaliz Abreau Lanfranco, MD, FACP

Presenter: Nitesh Gandhi

Additional Authors: Yusuf N.Alalwan, Shivani Sharma, Dr. Vinay Shah

Pulmonary Aspergillosis in Patient with Pneumoconiosis

Introduction

Pulmonary aspergillosis is fungal infection caused by *Aspergillus fumigatus*. The common diseases that predisposes to pulmonary aspergillosis include tuberculosis, nontuberculous mycobacterial infection, asthma, lung cancer, prior pneumothorax with bulla formation, COPD, and fibrocavitary sarcoidosis. Pneumoconiosis is rare cause predisposing to aspergillosis. We present a case where a patient develops Pulmonary aspergillosis with history of occupational asbestosis.

Case presentation

A 68 year old male with a history of occupational asbestosis presents with recurrent episodes of hemoptysis. The amount was about 200ml consisting of dried, fresh, and clots. CT scan showed widespread pleural-based calcifications involving diaphragmatic surfaces and focal consolidative changes prominent in right middle lobe, lingula, and right upper lobe. It also showed bronchiectasis. The patient underwent bronchoscopy which did not show any active bleeding but did show evidence of recent bleeding in the RUL and RML. The patient was discharged but was admitted again due to repeated episodes of hemoptysis. The patient underwent embolization of right, left bronchial arteries, intercostal artery, and superior intercostal arteries. Repeat CT showed increased nodular debris within bronchiectatic airways in the right apex concerning for mycetoma. Fungal cultures were obtained, which showed *Aspergillus fumigatus*. The patient was treated with voriconazole.

Discussion

There are few theories to explain the increased risk of *Aspergillus* infection in asbestosis. First, exposure to asbestosis can cause changes in bronchi and lung parenchyma, which helps the growth of fungus. Another theory is that asbestos can affect the immune system causing weakening of the body's anti-fungal defenses. Per IDSA guidelines patient is treated with Voriconazole.

Saturday Poster #40

Category: Clinical Vignette

Program: Henry Ford Health System – Detroit

Program Director: Odaliz Abreau Lanfranco, MD, FACP

Presenter: Rohit Goel

Additional Authors: Jasmine-Yasmine A Omar, MD

Kikuchi-Fujimoto Disease: The Great Masquerader

A healthy 28-year-old African American male presented with a 1-month history of left-sided neck pain, daily fevers, fatigue, and night sweats. He has a cat at home who frequently scratches him. Physical exam was remarkable for a temperature of 103F and two prominent, fixed, rubbery, nontender left posterior cervical nodes. Labs showed elevated inflammatory markers and negative infectious workup (EBV IgM, HIV, hepatitis panel, toxoplasma and bartonella antibodies). Peripheral smear showed lymphopenia. CXR showed no acute process. CT soft tissue neck demonstrated prominent bilateral cervical lymph nodes. Excisional lymph node biopsy showed granulomatous lymphadenitis and benign lymphoid hyperplasia favoring lupus vs Kikuchi. Autoimmune workup was negative (ANA, rheumatoid factor, complement levels, Sjogren antibodies).

Kikuchi-Fujimoto disease, also known as histiocytic necrotizing lymphadenitis, is a rare self-limited syndrome characterized by lymphadenopathy and fever. Kikuchi can mimic a variety of diseases including infectious mononucleosis, extrapulmonary tuberculosis and lymphoma. Kikuchi commonly presents in young females of Asian descent, however has been reported across all ages, ethnicities, and in men. The pathogenesis is unclear but thought to be an immune response to an infectious agent mediated by T cells and histiocytes. Labs often show elevated inflammatory markers, lymphopenia and negative autoimmune workup. A negative ANA is particularly useful in the exclusion of lupus. Diagnosis is made by lymph node biopsy, ideally excisional, and will show paracortical necrosis and infiltration of histiocytes. Treatment is supportive as symptoms typically resolve within one to four months. Glucocorticoids are often employed to alleviate severe or persistent symptoms.

Saturday Poster #41

Category: Clinical Vignette

Program: Henry Ford Health System – Detroit

Program Director: Odaliz Abreau Lanfranco, MD, FACP

Presenter: Lucas Maahs

Additional Authors: Farhan Hussain, MD and Rhanda Loutfi, MD

Possible T-Cell Lymphoma Presenting with Secondary Hemophagocytic Lymphohistiocytosis and Autoimmune Hemolytic Anemia

Hemophagocytic lymphohistiocytosis (HLH) is primarily a pediatric disease that most often presents with multiorgan dysfunction. The greatest barrier for a successful outcome is the rarity of this condition, the variability of its presentation and its nonspecific findings.

A 54 year old male presented to the emergency department with fatigue, shortness of breath, weight loss and fevers for 3 months. He was found to be pancytopenic. He also had a high lactate dehydrogenase level, a low haptoglobin level and a positive direct antiglobulin test consistent with hemolysis. Computerized tomography (CT) of the chest, abdomen and pelvis showed supraclavicular, axillary and mediastinal lymphadenopathy, a sclerotic lesion in the T12 vertebra and marked splenomegaly. Comprehensive rheumatologic and infectious workup were unrevealing. Further workup revealed a markedly elevated and steadily rising ferritin level (up to 30846 ng/mL) as well as an elevated soluble CD25 level. Bone marrow biopsy showed hypercellularity and rare hemophagocytic cells. Fluorescent in-situ hybridization (FISH) and karyotypic analysis of the bone marrow aspirate were normal. T cell rearrangement (TCR) assay was positive and B cell rearrangement assay was negative. An excisional lymph node biopsy from the left axillary region was negative for lymphoma. The patient fulfilled 5 out of 8 criteria for the diagnosis of HLH, but the cause was less evident.

This case represents an overall diagnostic challenge. Although his TCR assay suggested a T-cell lymphoma, the final diagnosis remained unclear. The case also reinforces the importance of early suspicion and treatment for HLH to achieve successful outcomes.

Saturday Poster #42

Category: Clinical Vignette

Program: Henry Ford Health System – Detroit

Program Director: Odaliz Abreau Lanfranco, MD, FACP

Presenter: Krishna Modi

Additional Authors: Krishna Modi

A Case of New Lupus Presenting with Seizures and Altered Mental Status

Case Presentation:

A young woman presented with seizures. Her physical exam was significant for fevers, a rash on her face and abdomen. Laboratory studies revealed elevated transaminases. MRI brain showed leptomeningeal enhancement, and cerebrospinal fluid (CSF) studies revealed pleocytosis with lymphocytic predominance, and an elevated IgG without oligoclonal abnormality. Her blood and CSF cultures were aseptic. Despite broad spectrum antibiotics, the patient had worsening neurologic status and eventually became non-responsive. Further evaluation revealed an ANA with titers >1:1280, positive anti-DS antibodies, smith antibody, anti-Sjögren's-syndrome-related antigen A, and low C4. Patient was diagnosed with lupus cerebritis. Her antibiotics were stopped, and she was started on pulse dose methylprednisolone with mild improvement prompting cyclophosphamide therapy on which she made significant neurological improvement.

Discussion:

This is a case of lupus cerebritis as the first major symptom of systemic lupus erythematosus (SLE). SLE predominantly presents in young women with constitutional symptoms, malar rashes, and musculoskeletal involvement. This is a case with CNS involvement resulting in altered mental status and seizures. The pathogenesis of lupus cerebritis is largely unknown, but vasculopathy and generalized inflammation have been implicated. Lupus cerebritis is a diagnostic dilemma which becomes more elusive when a patient does not have a known lupus diagnosis.

Conclusions:

Lupus cerebritis should be on the differential for patients presenting with unexplained altered mental status. The greatest barrier to treatment remains at the diagnostic stage, and thus an extensive evaluation must be performed to look for underlying symptoms that may point to autoimmune disease.

ACP Michigan Chapter Scientific Meeting 2019

Saturday Poster #43

Category:

Program: Henry Ford Health System – Detroit

Program Director:

Presenter:

Additional Authors:

Abstract Removed

Saturday Poster #44

Category: Clinical Vignette

Program: Henry Ford Health System – Macomb
Program Director: Amitha Aravapally, MD, FACP
Presenter: Firdhous Alimathunisa Abdul Kather
Additional Authors: Ali Shakir, MD

The Fitbit: A Novel Tool for Predicting Complete Heart Block

Bifascicular block has the potential risk of progression to complete heart block. Typically, monitoring for symptoms and heart rate guides timing for definitive pacemaker therapy. Current monitoring devices being used include Holter, event recorder, and implantable loop recorder. We present a case of a 72-year-old male with a history of coronary artery disease coronary artery bypass graft surgery and bifascicular block who presented to the hospital with syncope which required emergent transvenous pacemaker prior to permanent pacemaker placement. About 2 weeks prior to presentation, he had a syncopal spell while he was wearing his ambulatory wrist heart monitor “a Fitbit”. Upon review of the Fitbit heart rate monitor, the Fitbit had correctly recognized bradycardia during his syncopal spell. We report a case of a Fitbit correctly identifying advancing paroxysmal complete heart block. The Fitbit and other wearable wrist monitors maybe an alternative way to monitor patients long-term at increased risk for progression to complete heart block.

Saturday Poster #45

Category: Clinical Vignette

Program: Henry Ford Health System – Macomb

Program Director: Amitha Aravapally, MD, FACP

Presenter: Hayk Papukhyan

Additional Authors: Ahmad Al-Jamal; Gurinder Gakhal, MD; Joseph Molina, MD; Anuradha Sreenivasan, DO

The Extremes of Hereditary Angioedema

Hereditary angioedema (HAE) which is characterized by spontaneous recurrent episodes of swelling without pruritis or urticaria in various areas of the body. This is a rare and complex autosomal dominant disease with the prevalence estimated to be about 1 individual per 50,000. C1 esterase inhibitor (C1-INH) is responsible for inhibition of complement activation. Type 1 HAE is defined as low levels of C1 esterase inhibitor.

A 67-year-old female with a past medical history significant for lymphoma, hypertension, and hyperlipidemia presented to the emergency department for swelling of her chin that progressed to her bilateral cheeks and lower lip over the course of 12 hours. The Patient was given epinephrine, Pepcid, Benadryl, and Solu-Medrol without improvement. An emergent laryngoscopy showed an edematous larynx and the patient was intubated and given FFP. CT head revealed inflammatory changes overlying the left mandibular body and left submandibular regions as well as the right submental and submandibular regions. Laboratory testing showed decreased levels of C1-INH and the diagnosis of Type 1 HAE was made. There is a sequela of migratory swelling present in various areas of the body that can arise anytime, however more common sites are the face and abdomen. Involvement of the Larynx is a medical emergency with lethal consequences if it is not recognized Immediately. Intubation for airway protection is emergent and key for patients survival. Type 1 HAE it is important to administer FFP or C1 inhibitor concentrate to replenish C1 esterase inhibitor levels, therefore, inhibiting the Bradykinin mediated pathway.

Saturday Poster #46

Category: Clinical Vignette

Program: Henry Ford Health System – Macomb

Program Director: Amitha Aravapally, MD, FACP

Presenter: Adithya Peruri

Additional Authors: Adithya Peruri, MD; MaryBeth Shively, DO, MPH; Natesh Lingam, MD

Atrial Myxoma: Presenting as Postpartum Chest Heaviness and Shortness of Breath Postpartum

A previously healthy 27-year-old woman presented to her primary care physician with a 6-month history of worsening exertional dyspnea and orthopnea. The physical examination was notable for sinus tachycardia, an abnormal heart sound initially thought to be an S3 gallop, and edema of both legs. A chest radiograph showed pulmonary venous congestion. Transthoracic echocardiography revealed a mass that was attached to the interatrial septum, with partial prolapse into the left ventricle obstructing the mitral-valve inflow during diastole. The additional heart sound after the S2 was recognized as a characteristic “tumor plop.” The patient underwent excision of the left atrial mass (which measured 5.7 cm by 4.3 cm by 5.0 cm), resection of the interatrial septum, and septum reconstruction with a bovine pericardial patch. Pathological analysis confirmed the diagnosis of an atrial myxoma. Cardiac myxomas are the most common type of primary cardiac tumor in adults and usually occur in the left atrium. If the condition goes untreated, complications such as congestive heart failure, embolic stroke, and sudden death can occur. Surgical resection is the indicated therapy. A postoperative echocardiogram showed a normal ejection fraction and no flow across the interatrial septum. The patient had an unremarkable postoperative course and was discharged home and has been in good health since.

Saturday Poster #47

Category: Clinical Vignette

Program: Henry Ford Health System – Macomb

Program Director: Amitha Aravapally, MD, FACP

Presenter: Swetha Ramireddy

Additional Authors: Adithya Peruri, Enrique Calvo-Ayala, Najia Huda, Anuradha Sreenivasan

**From the Mouth to the Mediastinum: A Near Fatal Complication to Endobronchial
Ultrasound-Guided Transbronchial Needle Aspiration**

Introduction

Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is regarded as a safe procedure for investigating mediastinal and hilar lymphadenopathy. Here, we present a case of a rare complication of EBUS-TBNA.

Case Presentation

A 49 year old Caucasian male presented with chronic cough, night sweats and a right-sided neck mass. He stated the neck mass was waxing and waning in size over the prior 2 months. In the three days prior to presentation, he said the mass had gotten significantly larger. Approximately 1 month prior to presentation, he underwent an EBUS-TBNA after a CT of the chest showed mediastinal lymphadenopathy and ground glass opacifications. Cytology results from the EBUS-TBNA of the mediastinal lymph nodes revealed non-caseating granulomas consistent with a diagnosis of Sarcoidosis. A CT Angiography (CTA) of his chest was obtained which showed a centrally necrotic lymph node in the right mediastinum that was grossly enlarged compared to what was found in a prior CT of his chest. A mediastinoscopy was performed, revealing a necrotic mediastinal mass with purulent discharge. An I & D was done, and a percutaneous drain was left in place for some days. Cultures grew *Actinomyces odontolyticus* and *Streptococcus anginosus* and the patient subsequently required Ertapenem for four weeks.

Discussion

Necrotizing mediastinal adenitis is an uncommon complication to EBUS-TBNA. Growth of common oral commensal flora in the lymph node suggests direct inoculation via the bronchoscope may have occurred. Timely diagnosis and management of this complication are key given its high risk for fatality.

Saturday Poster #48

Category: Clinical Vignette

Program: Henry Ford Health System – Macomb

Program Director: Amitha Aravapally, MD, FACP

Presenter: Saumeet Shah

Additional Authors: Jay Patel, Omokayode Osobamiro

Malignancy Induced Hemophagocytic Lymphohistiocytosis

Hemophagocytic Lymphohistiocytosis is a rare, aggressive and life threatening condition characterized by excessive immune activation. With variable clinical presentations, lack of specificity of the clinical and laboratory findings, and outcomes limited by delay in identification discussion is warranted to help with this challenging diagnosis. A 57 year old female presented for a CT of the chest after failed outpatient treatment for pneumonia; imaging denoted diffuse lymphadenopathy, follow up with Hematology/Oncology and two fine needle aspirations with inconclusive results. Approximately 2 months later she presented to the ED with progressive shortness of breath, hypoxia and chest pain associated with fatigue and cough. Physical exam was significant for only bilateral crackles at the lung bases. She was diagnosed with a subsegmental PE after imaging, pneumonia and lactic acidosis, and was subsequently admitted to the MICU and started on broad-spectrum antibiotics and heparin. General surgery was consulted for excisional biopsy of the lymph node, resulting in a T Cell Lymphoma with underlying B Cell Lymphoma. In post-op she became tachycardiac, tachypneiac and hypoxic. Over the next 5 days, she became anemic, thrombocytopenic, febrile, hypercalcemic, hyperuricemic and hypofibrinogenemic, and developed splenomegaly with worsening lactic acidosis. HLH was ultimately identified with a severely elevated Ferritin level and elevated IL-2 (CD25) receptor, at which time she was exhibiting tumor lysis syndrome and hemodynamic instability; subsequently leading to her death. Although rare, this case illustrates the necessity for early identification of HLH and initiation of treatment, especially in the setting of an unclear clinical picture delaying diagnosis.

Saturday Poster #49

Category: Clinical Vignette

Program: Mercy Health Grand Rapids/MSU

Program Director: Mark Spoolstra, MD, FACP

Presenter: Faizan Khan

Additional Authors: Ali Zakaria, Shehbaz Ahmed, Jay Levinson

Adenocarcinoma Presented as Massive Gastric Distention

Introduction: Chronic gastric distention is a rare condition that can occur due to an underlying obstruction or dysmotility. Gastric adenocarcinoma can rarely manifest as massive gastric distention due to partially obstructing mass or peptic stricture. Severe and fetal sequelae can complicate this disease if early detection and prompt intervention with gastric decompression or resection is delayed.

Case: A 60-year-old African-American male patient with a PMH of hepatitis C, hypertension and polysubstance abuse, presented to the ER complaining of diffuse abdominal pain, intermittent nausea and vomiting, early satiety, and a 25lb weight loss over 8 months. Vitals and labs were largely normal. Exam revealed mildly distended abdomen with positive bowel sounds. CT abdomen revealed markedly distended stomach with ingested debris extending to the pelvis with a mass effect on surrounding abdominal structures. The patient was treated conservatively with NG tube placement with 3L of fluid removed over 24 hours. EGD revealed an ulcerated, partially obstructive lesion at the pylorus. Histopathology confirmed gastric adenocarcinoma. The patient underwent partial gastrectomy with Roux-en-Y reconstruction.

Discussion: Benign etiology account for a vast majority of gastric distention, and peptic ulcer disease is the leading cause. Amongst the malignant causes, gastric adenocarcinoma is important to consider despite its rarity in the western countries. Serious complications of massive gastric distention include dehydration with prerenal failure, ischemia, perforation, sepsis, multi-organ failure and death. Treating physicians should keep a high index of suspicion with prompt NG tube decompression and surgical intervention to prevent these dreadful sequelae.

Saturday Poster #50

Category: Clinical Vignette

Program: Mercy Health Grand Rapids/MSU

Program Director: Mark Spoolstra, MD, FACP

Presenter: Iman Qaiser

Additional Authors: Kyle Jurayj, Anthony Propson, Aaron Eggebeen, Mark Spoolstra

Anti-HMGCR Myopathy

A 68 year old female presented with progressive proximal muscle weakness of 4 month duration, worsening to the point of now requiring wheelchair for ambulation. Past medical history included hyperlipidemia being treated with a statin for many years. Initial workup revealed transaminitis and elevated creatinine kinase. A quadriceps muscle biopsy showed necrotizing myopathy. On further investigation, HMGCR (3-Hydroxy-3-Methylglutaryl-CoA Reductase) autoantibodies were positive. Statins were held. Intravenous fluids and intravenous immunoglobulins were initiated. She was treated with high-dose corticosteroids and methotrexate. Creatinine kinase levels and muscle weakness improved over the subsequent months.

Statins are one of the most frequently used drugs today due to their role in reducing cardiovascular risk. About 27.8% of US adults, 40 years and older, use statins. Statins have been commonly linked to musculoskeletal complaints including myopathy, myositis, myalgias and rhabdomyolysis with the incidence of muscle pain reaching up to 15% in statin-users. Immune-mediated necrotizing myopathy (IMNM) is a relatively newer entity and one of the rarer side-effects of statins, of which the incidence is 2-3 per every 100,000 patients treated with statins. Statin use before presentation can vary and ranges from 2 months to 10 years. While other statin-induced myopathies resolve with discontinuation of statins, IMNM does not and instead requires immunosuppressive therapy. It is vital that myopathy with positive Anti-HMGCR antibodies is differentiated from other statin-induced myopathies and treated more aggressively.

Saturday Poster #51

Category: Clinical Vignette

Program: Mercy Health Grand Rapids/MSU

Program Director: Mark Spoolstra, MD, FACP

Presenter: Zabila Saeed

Additional Authors: Rehana Siddiqi MD, Shahroz Adil MD, Nasir Khan MD

Breast Multiple Myeloma in a Man: An Interesting Case of Recurrent Myeloma after Complete Remission

Multiple myeloma (MM) is a disseminated malignant B-cell lineage neoplasm characterized by clonal proliferation of plasma cells in the bone marrow. The involvement of breast with MM has been rarely reported. To our knowledge only 20 patients have been reported and only one occurred after remission of the disease but without bone marrow transplantation. We report a case of breast masses that were the first symptoms of recurrent MM after complete remission and bone marrow transplantation.

67 year old male diagnosed with stage III multiple myeloma in April 2018 on bone marrow biopsy. He had adverse cytogenetics with TP53, and t(14; 16). Other laboratory studies showed hypercalcemia, renal insufficiency and serum protein electrophoresis that revealed a monoclonal protein, IgA lambda of 3.5 g/dL. Initially started on high dose dexamethasone followed by infliximab and bortezomib with tremendous response. He had autologous stem cell transplant in October 2018 with complete remission. In March 2019, he developed bilateral breast pain with masses. A core biopsy was taken that was consistent with plasma cell neoplasm. KRD regimen with Kyprolis, Revlimid, and dexamethasone was started in May 2019.

Breast mass is a rare expression of MM and the majority of breast plasmacytomas were reported in women. These tumors can be truly solitary plasmacytic tumors (without evidence of concurrent MM) or can precede, occur synchronously, or become evident after the diagnosis. This is the first case of MM of the breast that occurred after disease remission and bone marrow transplantation.

Saturday Poster #52

Category: Clinical Vignette

Program: Mercy Health Grand Rapids/MSU
Program Director: Mark Spoolstra, MD, FACP
Presenter: Rehana Siddiqi
Additional Authors: Alicia Boone, DO

A Rare Case of Citrate-Induced Hypomagnesemia via Apheresis

Citrate-induced hypocalcemia is well-documented in literature. However, the effects of citrate on magnesium, an equally-critical divalent cation in blood, are virtually unknown. In this report, we present a case of citrate-induced hypomagnesemia in a plasma donor.

A 48-year-old female with past medical history of hypertension, hyperlipidemia and GERD presented in the outpatient setting with chronic hypomagnesemia. After failing therapy with magnesium oxide, she was referred to Nephrology. Renal magnesium wasting was ruled out with low FEMg, while hyperaldosteronism was ruled out with normal aldosterone: renin ratios. Upon referral to Gastroenterology, magnesium oxide was switched to magnesium chloride, and omeprazole was discontinued, neither of which improved her hypomagnesemia; instead further necessitating regular intravenous magnesium infusions. It was not until the following year, when the patient asked for a physician signature on a plasma donation form, that it was discovered that she had been consistently donating plasma twice a week for years. Upon discontinuing plasma donations, her magnesium levels have remained in the low-normal range despite being off oral magnesium supplements, continuing omeprazole use, and not receiving magnesium infusions. Retrospective review of prior labs and imaging revealed that the patient had undiagnosed extensive hepatic steatosis with decreased hepatic synthetic function, which subsequently decreased her intrinsic ability to metabolize citrate.

Given the increasing incidence of hepatic disease, this case may be the canary in the coal mine for hypomagnesemia associated with other apheresis procedures, in which the donors of blood products will experience the adverse effects of citrate, instead of the recipients.

Saturday Poster #53

Category: Clinical Vignette

Program: Michigan State University – East Lansing

Program Director: Supratik Rayamajhi MD, FACP

Presenter: Jacob Burch

Additional Authors: Lawreshey Charles, Khader Herzallah

Ischemic Stroke as a Result of Lambert's Excrescence

Introduction

We present a rare case of ischemic stroke caused by suspected embolism of Lambert's excrescence.

Case Presentation

A 59 yo female with history of hypertension and diabetes was hospitalized for DKA. CT head on admission was negative. While inpatient, the patient suffered acute onset of left sided weakness and slurred speech. MRI showed right-sided mid pontine acute infarct with diffusion restriction with no evidence of hemorrhage. CTA head and neck showed bilateral common carotid to internal carotid plaque formations with 40% stenosis of the right side and <30% stenosis of the left side. TEE showed the left atrial appendage with no evidence of thrombus, negative bubble study, and presence of Lambert's excrescence on the aortic valve. The patient refused holder monitor or implantable loop recorder, but demonstrated no evidence of dysrhythmia while on telemetry throughout her hospitalization. The decision was made to start the patient on dual anti-platelet therapy with aspirin and clopidogrel as well as apixaban. The patient was then discharged to inpatient rehab.

Discussion

Lambert's excrescence are normally asymptomatic filamentous processes found at the site of cardiac valve closure. While exceedingly rare, Lambert's excrescence had been described as a cause of cardioembolic stroke in 27 cases in English literature as of 2018. This diagnosis is made through the use of transesophageal echocardiogram, as well as ruling out more common causes of ischemic stroke. Due to the rarity of this condition, there is not a set treatment protocol at this time.

Saturday Poster #54

Category: Clinical Vignette

Program: Michigan State University – East Lansing

Program Director: Supratik Rayamajhi MD, FACP

Presenter: Robert Gumbita

Additional Authors: Kyle Robertson, Sonya Gupta

Obscure Cause of Anemia: A Case of a Rare Metastatic Site for Urothelial Carcinoma

Introduction

Urothelial carcinoma is the most common malignancy involving the urinary system and 9th most common malignancy worldwide. Distant metastasis is often seen in pelvic lymph nodes, lung, liver, and bone but very few case reports have described small intestinal involvement. We present an interesting case of a patient found to have urothelial carcinoma with metastases to the duodenum.

Case

A 59-year-old female presented with complaints of fatigue, diarrhea, nausea and vomiting. Laboratory studies were significant for an elevated WBC of 18, anemia with Hgb of 9.1. Without another explainable cause of symptoms, the patient was taken for EGD/colonoscopy. Both were grossly unremarkable lacking evidence of bleeding, mass, or ulceration. Random duodenal biopsies were taken to rule out celiac disease. Pathology report resulted as metastatic carcinoma, favored to be urothelial in origin. EUS was then performed with multiple enlarged lymph nodes visualized, with FNA reaffirming the above pathology. CT abd/pelvis showed extensive adenopathy and diffusely abnormal left kidney with high grade obstruction. Follow-up PET revealed extensive malignancy involving duodenum, left kidney, left adrenal gland, and T12 vertebrae. Patient was referred to oncology for further management.

Discussion

This case highlights the importance of establishing causation for anemia when common complaints such as hematuria, melena, nutritional deficiency, and malabsorption are absent. In this case, random duodenal biopsies lead us to an unexpected and rare culprit. Perhaps further inquiry can be made into the metastatic patterns of urothelial carcinoma with attention to earlier detection methods as to improve outcomes in these patients.

ACP Michigan Chapter Scientific Meeting 2019

Saturday Poster #55

Category:

Program: Michigan State University – East Lansing

Program Director:

Presenter:

Additional Authors:

Abstract Removed

Saturday Poster #56

Category: Research

Program: Michigan State University – East Lansing

Program Director: Supratik Rayamajhi MD, FACP

Presenter: Fazal Raziq

Additional Authors: Calvin Abro MD, Fawzi Abu Rous MD, Nishraj Basnet MD , Shilpa Tatineni MD, Ardy Fenando MD, Muhammad Usama MD, Ania Fida MD

**Safety and Efficacy of Four-Drug Regimens in Newly Diagnosed Multiple Myeloma:
Systematic Review of Clinical Trials Data**

The genetic landscape of multiple myeloma (MM) is complex. To improve outcomes, multiple agents with varied mechanisms of action targeting different MM clones are needed. We did a systematic review of ongoing phase I-III clinical trials in newly diagnosed multiple myeloma (NDMM) per PRISMA guidelines using PubMed, Cochrane, EMBASE, Web of Science and Clinicaltrials.gov databases. A qualitative synthesis of efficacy and safety data was performed. Data for six on-going clinical trials involving 1,927 patients were included. The median age and follow-up time of these patients were 62.75 years and 11.75 months respectively. For transplant-eligible patients, Dara-VRD demonstrated the best treatment response (VGPR=100%, CR rate=63% and 15 months PFS=94%) with toxicity comparable to Dara and VRD alone. For transplant-ineligible patients Dara-VMP (ORR=90.9%, VGPR+ =72.9%, 27 months PFS=NR) and Isa+VRd (ORR=93%, VGPR=71.43%, 7.5 months PFS=100%) were well tolerated with improvement in overall response. Dara-IRd showed excellent efficacy and rapid response irrespective of transplant eligibility (ORR=95%, VGPR=47%) with 100% 5 months PFS. In NDDM four-drug regimens has shown improved efficacy with higher ORR, deeper response, a higher proportion of MRD negativity and higher \geq VGPR response when compared to three-drug regimens, with a comparable incidence of toxicities.

Saturday Poster #57

Category: Research

Program: Sinai Grace Hospital – DMC

Program Director: Mohamed Siddique, MD, FACP

Presenter: Javardo McIntosh

Additional Authors: Yasir Alsaraf M.D. , Akshay Sharma M.D., Rana Ismail PhD, Malitha Hettiarachichi MD

Is DRIP Score More Effective Than HCAP Classification Detecting Patients at Risk for MDR Bacteria?

Introduction: Healthcare-associated pneumonia (HCAP) classification include patients who have frequent contact with the healthcare environment. The DRIP score was recently introduced to allegedly provide better risk prediction of pneumonia due to multi-drug resistant (MDR) pathogens.

Methods: We performed a literature search using PubMed and Cochrane databases. We used keywords “Pneumonia,” “Healthcare-associated pneumonia,” “Multi-drug resistance risk factors.” We evaluated 11 studies including systematic reviews and meta-analysis, prospective observational and retrospective studies.

Results: One study compared patients with community-acquired pneumonia (CAP) to HCAP patients, and reported that the latter were older and had significantly more comorbidities. MDR bacteria were low in both cohorts. According to a systematic review the high prevalence of MDR organisms in HCAP vs. CAP was comparable in both HCAP and CAP; it also demonstrated that the excess mortality within the HCAP groups was primarily due to confounders such as age and comorbid conditions. Webb et al. evaluated the risk factors for pneumonia due to MDR pathogens and derived a DRIP score. The DRIP Score accuracy was 81.5% and surpassed that of HCAP criteria (69.5%); this resulted in reduced use of unnecessary broad-spectrum antibiotics by 46%. Another study applied the DRIP score retrospectively to HCAP patients and compared it to the HCAP criteria; adopting the HCAP led to a 31% increase in broad-spectrum antibiotic use versus 9% using the DRIP score.

Conclusion: Using the DRIP score approach seems to be more predictive in detecting patients at risk of MDR pneumonia and has the potential to decrease antibiotic overutilization without increasing morbidity and mortality.

Saturday Poster #58

Category: Clinical Vignette

Program: Sinai Grace Hospital – DMC

Program Director: Mohamed Siddique, MD, FACP

Presenter: Logeswari Neelakandan

Additional Authors: Jared I. Tucker, Michael E. Nissan, Apoorva V. Saoji, E. M. Malitha S. Hettiarachchi, Thomas J. Piskorows

Organizing Pneumonia is Not Just a COP-Out Diagnosis

Cryptogenic organizing pneumonia (COP), formerly known as bronchiolitis obliterans organizing pneumonia (BOOP), is a rare condition characterized by idiopathic deposition of fibroblasts and myofibroblasts compromising the terminal bronchioles and alveoli in which fibroblasts replace the inflammatory cells, deposit fibrin, a process denoted by the name “organizing pneumonia.”

CASE DESCRIPTION

A 57-year-old black male presents with progressive dyspnea and nonproductive cough for 3 months, diaphoresis, chills, and unintentional weight loss. Prior history of prolonged incarceration, parakeet handling, chronic use of tobacco, COPD and marijuana. Clinically, presented with right basilar inspiratory crackles, lacking extrapulmonary findings. Initial chest radiograph showed innumerable diffuse interstitial pulmonary nodules, concerning for miliary tuberculosis. Serial acid-fast bacillus and sputum cultures were negative. Urine drug screen demonstrated cannabinoids. HIV Legionella antigen, Mycoplasma pneumoniae, Chlamydiae pneumoniae, and psittaci IgM were negative. Beta-D glucan, Aspergillus, and Histoplasma antibody were negative. High-resolution CT scan demonstrated diffuse, tiny pulmonary nodules delineated in a bronchovascular distribution. Albeit ANA titer positivity (1:1280), ANCA was negative rendering vasculitis unlikely. Bronchoalveolar lavage was negative. Bronchoscopic biopsy indicated acute on chronic inflammation with interstitial fibrosis. Video-assisted thoracoscopic surgery demonstrated polypoid plugs of organized spindle cells with collagenous stroma situated within the lumens of distal airways and peribronchial airspaces.

DISCUSSION

Declaring a diagnosis of COP requires clinical, radiographic and histopathological features mutually consistent with organizing pneumonia while simultaneously lacking evidence for all other etiologies. Given the nonspecific symptoms of COP, it is imperative to diligently pursue the diagnosis in order to initiate prompt therapy, accurately prognosticate, and minimize sequelae.

Saturday Poster #59

Category: Clinical Vignette

Program: Sinai Grace Hospital – DMC

Program Director: Mohamed Siddique, MD, FACP

Presenter: Lindsey O'Neil

Additional Authors: Apoorva Saoji, MD (Resident); Heba Mahmoud, DO; Mohammed S. Siddique, MD; Rana Ismail, PhD, MSc.

Valproic Acid Overdose Induced Hyperammonemic Encephalopathy Treated with Hemodialysis and Levocarnitine

Introduction: Valproic acid (VA) is a commonly used anti-epileptic and mood stabilizing medication. VA overdose is relatively common and most notably causes encephalopathy, respiratory depression, hypotension, metabolic acidosis, hyperammonemia, hepatotoxicity, seizures, and death. Valproate-induced hyperammonemic encephalopathy (VHE) presents with a rapid neurologic decline, possible cerebral edema, and seizures.

Case Description: A 41-year-old woman with a known history of depression, drug abuse, and suicide attempts, presented with acute encephalopathy and Glasgow Coma Score of 3 and a diagnosis of VA overdose with hyperammonemia ensued. The patient was intubated and treatment initiated. She was hypotensive and an EKG revealed bradycardia with a prolonged QTc interval. First serum toxicology showed a VA level of $> 450\mu\text{g/mL}$ with free VA $> 100\mu\text{g/mL}$. Lab results revealed metabolic lactic acidosis (lactic acid 2.9mmol/L), ammonia level of $124\mu\text{mol/L}$, and an elevated CPK of 259U/L . Also, her urine drug screen was positive for cocaine and hepatitis C total antibody was positive. We administered one dose of lactulose and 3,000-mg of Levocarnitine; her VA level was 744 and her ammonia was $111\mu\text{mol/L}$. She received an additional total 4,000-mg of Levocarnitine, but remained altered and required two runs of hemodialysis before her VA level dropped to 46. The patient's encephalopathy resolved quickly and she was extubated the following day.

Discussion: VA intoxication and hyperammonemia present with a diverse range of mild to severe symptoms. In our case, the patient presented with significantly altered mental status, hemodynamic instability, and lab abnormalities that quickly improved with the use of Levocarnitine and hemodialysis.

Saturday Poster #60

Category: Clinical Vignette

Program: Sinai Grace Hospital – DMC

Program Director: Mohamed Siddique, MD, FACP

Presenter: Mohammad Ekram Rahman

Additional Authors: Javardo Mcintosh MD; Jared Tucker MD; Sulaiman Alhassan MD; Abu Fazal Shaik Mohammed MD

An Uncommon Cause of Pleural Effusion

Introduction

Pancreaticopleural fistula is a rare complication of acute and chronic pancreatitis. This can result in a large pleural effusion which can be both massive and recurrent after therapeutic thoracentesis. Presence of amylase in the pleural fluid is a classic finding.

Case description

A 48 year old male with history of chronic alcoholism, chronic pancreatitis with pseudocyst came in for left sided sudden onset, sharp, non radiating chest pain associated with dyspnea on exertion. He also reported productive cough, whitish sputum production along with wheezing and mild subjective fever. Cardiac work up was negative. Chest X-Ray (CXR) showed a large left sided pleural effusion. Computed tomography with contrast showed large left pleural effusion along with a retro gastric pseudocyst and peri-pancreatic edema. Laboratory work up showed lipase of 2640 and amylase of 982 Units/liter. Diagnostic thoracentesis showed exudative pleural fluid with amylase level > 10,000 units/liter. Repeat CXR showed no significant improvement of pleural effusion. A second therapeutic thoracentesis was done however pleural effusion re-accumulated within minutes. The frequent and rapid re-accumulation of pleural effusion suggested a fistula between the pancreatic pseudocyst and the pleural cavity. The patient was subsequently started on octreotide and discharged. Follow up CXR showed significant improvement.

Conclusion

Pancreaticopleural fistula is a rare complication of chronic pancreatitis. A delayed diagnosis can be avoided by pleural fluid analysis amylase. One should have a high index of suspicion in patients with chronic pancreatitis presenting with recurrent pleural effusion. This case also shows the octreotide can be used to successfully treat these patients.

Saturday Poster #61

Category: Clinical Vignette

Program: Sinai Grace Hospital – DMC

Program Director: Mohamed Siddique, MD, FACP

Presenter: Apoorva Saoji

Additional Authors: Wan Yee Kong, MD; Sarmad Almansour, MD

Rapidly Progressing Subcutaneous Lesions, an Unusual Presentation of a Common Condition

Systemic lupus erythematosus affects primarily women of child bearing age, and it is relatively more prevalent amongst African American female (406/100000). While dermatological involvement and small vessel vasculitis are both known presentations of SLE, our patient's presentation is unique as she does not have the classic malar rash/ discoid rash/ photosensitivity or a typical vasculitic rash.

38 y/o AA female with a h/o asthma and recently diagnosed hypertension on HCTZ-Losartan presented with a month's duration of fever, symmetrical arthralgia and stiffness involving the phalangeal and interphalangeal joints. She subsequently developed hip and back pain, lethargy, loss of appetite and 11 lbs weight loss over the duration of a month with decline in functional status and requiring assistance with ADLs. She also noticed rapidly evolving painful, burning skin lesions over her abdomen, groin, hips, buttocks and breasts. Vitals were significant for fever of 39.4C and tachycardia into 120s. Physical examination revealed hard, immobile, hyperalgesic, nodular lesions of varying sizes adherent to the skin and without overlying skin changes distributed over axillae, breasts, abdomen, hips, groin and thighs. Lab tests showed microcytic normochromic anemia and elevated ANA 1:5120 with a speckled pattern. She underwent biopsy of the lesions which showed severe pan dermal vasculitis consistent with leucocytoclastic vasculitis, which is the most common type of vasculitis seen in SLE. She was treated with high dose steroids and Plaquenil and improvement was noted within 5 days.

It's important to recognize the varied presentations of SLE and initiate treatment before development of end-organ damage.

Saturday Poster #62

Category: Clinical Vignette

Program: Sinai Grace Hospital – DMC

Program Director: Mohamed Siddique, MD, FACP

Presenter: Sarah Yahya

Additional Authors: Akshay Sharma, MD (Resident); Dr. Hettiarachchi, Malitha MD (Attending)

Splenic and Renal Infarcts Caused by Aortic Thrombosis

Introduction: Splenic and renal infarcts are rare causes of abdominal pain. Most systemic emboli originate from a cardiac thrombus. Infrequently, the thrombus may originate from the thoracic aorta. We present a case of a middle-aged woman who presented with abdominal pain due to splenic and renal emboli originating from aorta due to a remote motor vehicle accident.

Case Description: A 52-year-old female with a remote history of MVA-related trauma, presented to ED with progressive left upper quadrant abdominal(LUQ) and flank pain. Patient's vitals were stable. Abdominal exam demonstrated a palpable spleen 2cm below the costal margin as well as LUQ and flank tenderness. Labs and EKG were unremarkable. No arrhythmias were recorded by prior loop-recorder Abdominal/pelvis CT with contrast showed multiple infarcts in the spleen and left kidney. Blood cultures were negative. She had normal transthoracic and transesophageal echo CTA thorax showed a thrombus within the distal aspect of ascending aorta with an oval component measuring approximately 8 x 4mm extending to the anterior aortic wall. Hypercoagulable work up was negative. Patient was started on lovenox with Coumadin bridge therapy and was discharged with outpatient follow up with cardiology and hematology clinic

Discussion:

In splenic/renal infarctions, the source is usually embolic. The emboli could be either cardiac or aortic in origin. Possible etiologies for aortic emboli include atherosclerosis, instrumentation, malignancy, and other hypercoagulable states. Rarely, traumatic aortic injuries from MVA can lead to thrombus formation and present as infarcts in different organs. Anticoagulation should be started immediately to prevent catastrophic complications

Saturday Poster #63

Category: Research

Program: Sinai Grace Hospital – DMC

Program Director: Mohamed Siddique, MD, FACP

Presenter: Patrick Yousif

Additional Authors: Ajit Thakur, Paramveer Singh, Rohan Naik, Rana Ismail, Camelia Arsene

Effect of Patient-Physician Relationship Established During First Contact on Patient Satisfaction in the Outpatient Setting

Introduction: It has been well-established that patient satisfaction with healthcare provided by physicians is a significant determinant of the quality of care and the overall health outcomes for the patient. Recent studies have shown that patient satisfaction is significantly increased by the physician's ability to provide explanations and show empathy for the patient's condition in an outpatient setting. This suggests that improving the patient-physician relationship is likely to have a significant impact on patient satisfaction, as well as enhance treatment adherence and health outcomes. Hence, this prospective study evaluated the efficacy of a simple cost-effective intervention aimed at increasing a patient's understanding of their physician, and thereby improve patient satisfaction with the overall quality of their outpatient care.

Methods: This prospective double-blind, randomized, multicenter clinical trial will present data collected from at least 350 outpatients who were either randomized to the intervention group (patients received a small biosketch card, which included a color photo of the physician, contact information, educational background, specialty, length of clinical experience, research interests, hobbies and other personal interests) or a control group. Patient satisfaction with the overall quality of their outpatient care was assessed after patient discharge via a modified version of the well-established and validated patient satisfaction questionnaire (PSQ18). Statistical analysis was done using a multivariable regression model.

Results and Conclusions: Our preliminary data suggests that a simple low-cost biosketch card provided to new patients at first contact with their physician can indeed improve patient satisfaction with the overall quality of their outpatient care.

Saturday Poster #64

Category: Clinical Vignette

Program: Spectrum Health/MSU

Program Director: Talwnda Bragg, MD, FACP

Presenter: Rayhaan Akram

Additional Authors: Capel, Brett; Thabet, Barakat

Allergic Heart – Idiopathic Hypereosinophilic Syndrome or ANCA-neg EGPA?

Hypereosinophilic syndrome (HES) is characterized by hypereosinophilia and eosinophilic tissue infiltration. Eosinophilic granulomatosis with polyangiitis (EGPA) is a vasculitis of small-med arteries that also shares features of peripheral eosinophilia and extravascular eosinophils. Despite overlap of clinical features, management of these conditions differs and therefore presents a challenge to clinicians.

A 59-year-old male with history of asthma presented with new-onset chest tightness, shortness of breath and peripheral edema. Patient denied any rash, neuropathy or sinus involvement. Labs revealed elevated troponin and leukocytosis with eosinophilia. Coronary catheterization was normal. Standard therapy for congestive heart failure was started and he was discharged with plans for outpatient follow-up. Shortly after discharge, he developed sudden fatigue, dyspnea, and profound hypotension. He was urgently transferred to a tertiary center. Labs revealed hypereosinophilia ($23 \times 10^9/L$). Echocardiogram showed markedly reduced ejection fraction at 16%. Endomyocardial biopsy and BAL from bronchoscopy showed presence of eosinophils with no granulomas. Laboratory work-up including parasitic serologies, Vit B12, tryptase, ANCA, and myeloproliferative molecular testing were unremarkable. Patient was started on high-dose steroids with subsequent reduction of peripheral eosinophilia. However, he continued to have very low cardiac output. Unfortunately, patient had a prolonged cardiac arrest and was placed on ECMO. He subsequently developed bowel pneumatosis and family elected comfort-care measures.

In a patient with history of asthma who presents with hypereosinophilia and organ damage with no laboratory evidence regarding etiology, it is challenging to differentiate between idiopathic HES and ANCA-neg EGPA. Do these share a common pathogenesis, and does one progress into another?

ACP Michigan Chapter Scientific Meeting 2019

Saturday Poster #65

Category: CQI/EBM

Program: Spectrum Health/MSU

Program Director: Talawnda Bragg, MD, FACP

Presenter: Gloria Kyomuhendo

Additional Authors: Amina Jaji, MD, Candace Smith-King, MD, Lisa Lowery, MD, MPH

Impacting the Cultural Intelligence in a Residency Sponsoring Institution

Objective: To assess the changes in perception surrounding culture and diversity within a residency sponsoring institution per Residents and Fellows from 2017 to 2019 s/p implementation of Diversity Grand Rounds, cultural competency workshops and multiple other racial/ethnic and diversity/inclusion awareness programs. Furthermore, to assess how the efforts to recruit and retain a more diverse workforce at our residency sponsoring institution has affected our current rate of minority residents, physicians and nursing staff.

Method: Initial survey from June 2017 will be compared to current perceptions from survey sent out in 2019. Survey sent anonymously from RFDC (Resident/Fellow Diversity Council) e-mail. Specifically assess changes from those in 2017 and their perceptions now s/p multiple diversity/inclusion workshops/events.

Results: Will be graphically represented showing changes from 2017 to 2019

Conclusion: Will determine how programs implemented since 2017 have changed the perspective of culture/diversity within the residency sponsoring institution. These strategies are aimed at improving not only the culture within the residency sponsoring institution but also patient care.

Saturday Poster #66

Category: Research

Program: Spectrum Health/MSU

Program Director: Richard Switzer, MD, FACP

Presenter: Megan Lineer

Additional Authors: Lisa Lowery MD

Protocol Based Management of Sex Trafficking Victims

BACKGROUND: Though many healthcare providers will interact with victims of sex trafficking, very few recognize them. Even if these victims are identified, fewer providers know how to manage and connect them with appropriate resources. Our objective was to identify knowledge gaps on how to manage victims of sex trafficking, if any protocols existed within our institution, and if a protocol would be helpful for future encounters with trafficking victims.

METHODS: Survey of 300 healthcare workers including physicians, nurses, nurse practitioners, physician assistants, and social workers at Spectrum Health hospitals and clinics. In particular, we focused on specialties that would likely encounter victims, such as social work, pediatrics, internal medicine, emergency medicine, family medicine, obstetrics and gynecology. The survey was sent through email.

RESULTS: Of providers surveyed, half (53%) do not know what to do if they identify a patient that is being trafficked. Ninety-two percent are not at all comfortable or somewhat comfortable with managing or treating a victim. Only 6% of respondents currently know of a protocol that they would use if they encounter a victim. Most respondents (94%) did agree that having a protocol in place would improve care given to these patients.

DISCUSSION: Even though sex trafficking training is now required for licensing and more providers are being trained, there is a lack of confidence in how to manage sex trafficking victims. There is a need for a coordinated, uniform protocol which would allow for better identification and treatment of this vulnerable population.

Saturday Poster #67

Category: Clinical Vignette

Program: Spectrum Health/MSU

Program Director: Talawnda Bragg, MD, FACP

Presenter: Vetriselvi Moorthy

Additional Authors: Manivannan Veerasamy, MD, Theodore Boeve, MD, Tomasz Timek, MD, Russell Lampen, DO, Jorgelina de Sanctis, MD

Mycobacterium Chimaera Infection after Cardiac Surgery – Case Series

Mycobacterium Chimaera (M. Chimaera) infection following cardiac surgery due to contaminated cardiopulmonary bypass heater cooler unit has been reported worldwide since 2011. We describe the clinical features, diagnostic challenges and outcome of two patients with M. Chimaera infection that underwent cardiac surgery in 2015.

Case one is a 61 year old male who has a history of renal transplant with chronic immunosuppression and underwent aortic valve replacement in March 2015. He later developed sternal wound infection with oxacillin resistant staphylococcus epidermidis and M. Chimaera in November 2017.

Case two is a 58 year old male patient with history of remote Hodgkin's Lymphoma in remission and underwent AVR in June 2015. In January 2018 he developed fever of unknown origin and was diagnosed in May 2018 with Hemophagocytic Lymphohistiocytosis. Given persistent fevers he was ultimately diagnosed with disseminated M. Chimaera infection in September 2018.

Both patients were managed with medical and surgical intervention.

M chimaera is a non-tuberculous mycobacterium of mycobacterium avium complex. M Chimaera infections after cardiac surgery remarkably display prolonged latency, susceptibility of immunocompetent patients and high fatality. Prolonged latency makes the diagnosis challenging and frequently patients are misdiagnosed and treated with unfavorable consequences before correct diagnosis.

Due to the wide spectrum of disease and delay in presentation a high index of suspicion for M. Chimaera infection should be there in all patients presenting with unexplained illness after cardiac surgery. Improved awareness of physicians of M. Chimaera infection is also crucial for prompt diagnosis.

Saturday Poster #68

Category: Clinical Vignette

Program: Spectrum Health/MSU

Program Director: Talawnda Bragg, MD, FACP

Presenter: Pranay Pandrangi

Additional Authors: Begley, Brett, Cohle, Stephen

Coronary Arteritis in IgG4 Related Disease

IgG4-related disease is a recently recognized immune-mediated condition. It was first identified as a cause of autoimmune pancreatitis and initially believed to only affect isolated organs, but is now regarded as a steroid-responsive systemic condition affecting multiple organs. Most common involvement includes autoimmune pancreatitis, sialadenitis, dacryoadenitis, and retroperitoneal fibrosis. Histopathology is the key to diagnosis, characterized by lymphoplasmacytic infiltration, obliterative phlebitis, and storiform fibrosis. Cardiovascular system findings include aortitis, periaortitis, and a small number of cases report coronary artery involvement. We report a 78 year old man who died from a self-inflicted gunshot wound to the chest and head. Autopsy revealed diffuse thickening of the proximal circumflex and right coronary arteries. Histologically these vessels had panarteritis caused by a lymphoplasmacytic infiltrate containing an equal number of IgG+ and IgG4+ plasma cells, with the adventitia displaying storiform fibrosis. Coronary arteritis is an unusual manifestation of IgG4-related disease. This report serves to expand upon what is known about IgG4-related disease and increase awareness among providers to prevent long term complications through prompt treatment.

Saturday Poster #69

Category: Clinical Vignette

Program: St. Joseph Mercy – Ann Arbor

Program Director: Patricia McNally, MD, FACP

Presenter: Wigdan Farah

Additional Authors: Komal Imtiaz, Ahmed Mizyed

Angiosarcoma of Right Atrium Mimicking Cardiac Tamponade

Primary cardiac tumors are extremely rare (frequency of 0.02%). They are often silent and maybe diagnosed during routine cardiac imaging. At advanced stages, they become symptomatic depending on their location. Hemorrhagic tamponade, severe right heart failure, in-situ thrombus or tumor pulmonic embolism had been rarely reported as symptomatic presentations.

We present a 56 year old male with chief complaint of shortness of breath, lower extremity swelling and chest pain. Symptoms were progressively worsening over 6 months. He had past medical history of ankylosing spondylitis and uveitis. He denied any smoking, alcohol or occupational exposure. On physical exam, he was tachycardic, tachypnic, in severe distress with accessory muscles use. Lungs were clear to auscultation. Cardiovascular exam with distant heart sounds and 2+ lower extremity pitting edema. Bedside echocardiogram showed large pericardial effusion with tamponade physiology. Emergent pericardiocentesis revealed greater than one liter hemorrhagic effusion with negative cytology. Post-procedural echo showed severe right heart failure with right atrial mass. It was initially thought to be a thrombus. Cardiac MRI confirmed a bulky 6x3.1 cm sessile mass consistent with malignancy. TEE- guided myocardial biopsy was positive for angiosarcoma. Patient is currently undergoing chemotherapy.

Cardiac angiosarcomas account for a third of sarcomas of the heart. When symptomatic, hemorrhagic effusion is commonly encountered but usually negative for cytology, posing diagnostic dilemma. Once suspected, appropriate cardiac diagnostic testing should be utilized to reach final diagnosis. Cardiac MRI represents a high yield non-invasive testing that often expedite clinical approach and should be utilized if available

Saturday Poster #70

Category: Research

Program: St. Joseph Mercy – Ann Arbor

Program Director: Patricia McNally, MD, FACP

Presenter: Fadi Hawa

Additional Authors: Linsey Gilbert DO, Benjamin Gilbert DO, Vanessa Hereford MD, Mark Weiner MD, Ola Al-Sous MD

Phenobarbital versus Lorazepam for Alcohol Withdrawal Syndrome: A Retrospective Cohort Study

Introduction: Alcohol is the most widely available abused substance in the United States. The primary objective of this study is to compare the use of Phenobarbital versus Lorazepam in management of hospitalized patients with alcohol withdrawal in regards to hospital length of stay.

Methods: This is a retrospective cohort study over a two-year period (March/2016-March/2018) from three hospitals within the St. Joseph Mercy Health System. Records of 1007 patients admitted with a primary diagnosis of alcohol withdrawal were reviewed. Six-hundred and six patients met the inclusion criteria (543 in the Lorazepam cohort and 63 in the Phenobarbital cohort). Adjusted comparisons were done using propensity scoring methods. Hospital length of stay was set as the primary outcome. Secondary outcomes included all-cause and alcohol-related 30-day readmission rate, 30-day Emergency Department (ED) visits and need for Intensive Care Unit (ICU) transfer.

Results: Patients who received Phenobarbital had a statistically significant shorter length of stay as compared to patients who received Lorazepam (2.8 versus 3.6 days, P-value <0.001). Furthermore, the Phenobarbital treatment group had statistically significant lower rates of all-cause 30-day readmission (11.11% versus 14.18%, P-value= 0.039) and 30-day ED visits (11.11% versus 18.6%, P-value= 0.014). No statistical significance was detected for alcohol-related 30-day readmission rate and need for ICU transfers between the treatment groups.

Conclusion: This pilot study suggests that Phenobarbital might be a reasonable alternative to Lorazepam in the management of alcohol withdrawal syndrome. Larger scale studies, powered to prove non-inferiority of Phenobarbital to Lorazepam are required to corroborate these findings.

Saturday Poster #71

Category: Clinical Vignette

Program: St. Joseph Mercy – Ann Arbor

Program Director: Patricia McNally, MD, FACP

Presenter: Komal Imtiaz

Additional Authors: Wigdan Farah MD, John A. Hopper MD

Hemoptysis in IgA Nephropathy – A Life Threatening Manifestation

This report focuses on the independent involvement of kidney and lungs in IgA nephropathy and the importance of diagnosis of diffuse alveolar hemorrhage(DAH). In a systematic review, 42% of the cases presented with simultaneous involvement of kidneys and lungs, however alveolar hemorrhage presented as an independent manifestation in 21% of the cases. DAH can be a fatal presentation and it is significant to be aware of this differential.

A 32-year old male presented with fevers, hemoptysis and shortness of breath. Past medical history was significant for end stage renal disease secondary to IgA nephropathy. He was a smoker, with no occupational exposure, recent travels or sick contacts. Physical examination showed a male in respiratory distress with heart rate of 113, respiratory rate of 26, blood pressure 209/106, having frank hemoptysis. Basic workup demonstrated potassium of 7.0 and hemoglobin of 10.7. CT chest and abdomen showed pericardial effusion, ground glass opacity in left lung concerning for pneumonia. He failed to improve with Ceftriaxone and Azithromycin. Blood and respiratory cultures were negative. Workup for vasculitis was unremarkable. Bronchoscopy showed diffuse alveolar hemorrhage with subsequent initiation of steroids. His hemoptysis resolved and he was eventually discharged with prolonged steroid taper and outpatient pulmonary follow-up.

Diffuse alveolar hemorrhage can present as respiratory failure in patients with new or previously known IgA nephropathy. It is a rare presentation; however, a high index of suspicion is required as early steroid or immunosuppressive therapy can improve mortality and morbidity in these patients.

Saturday Poster #72

Category: Clinical Vignette

Program: St. Joseph Mercy – Oakland

Program Director: Geetha Krishnmoorthy, MD, FACP

Presenter: Bilal Khan

Additional Authors: Muhammad Khan, MD, Mohammedi N. Savliwala, MD, Geetha Krishnamoorthy MD, FACP

Anaphylactic Reaction to Apixaban; What Next? Another Factor Xa Inhibitor or Warfarin

Introduction:

Antithrombotic agents are amongst the most commonly used medications. Apixaban is a direct acting oral anticoagulant (DOAC) drug, which is a factor Xa inhibitor used for stroke prophylaxis in patients with atrial fibrillation and for treatment and prevention of venous thromboembolism (VTE). Hypersensitivity reactions to apixaban are rare, with skin rash and allergic edema reported in < 1% of patients taking apixaban, as observed in clinical trials.

Case Description:

A 72-year-old woman, with hypertension and atrial fibrillation, presented with sudden onset of swelling around her eyes and lips, tightness in throat, shortness of breath and itchiness all over her body. The two medications she took were apixaban and acetaminophen, a few hours before the onset of the reaction. On physical examination, patient was noticed to have red itchy rash mainly around her eyes and thighs, and dyspnea with wheezing. Patient received IV methylprednisolone, diphenhydramine and 2 doses of epinephrine in the Emergency Department. Patient's symptoms resolved quickly. Routine laboratory test results were within normal limits. Apixaban was discontinued and treatment was switched to warfarin and patient was discharged in stable condition.

Discussion:

Various cutaneous drug reactions, leucocytoclastic vasculitis and psoriaform drug reaction to apixaban have been reported. Cross reactivity between Factor Xa inhibitors has been demonstrated by patch testing and by a case of eczematous dermatitis after apixaban in a patient with edoxaban allergy. Internists should recognize that DOACs may lead to cutaneous and anaphylactic reactions, and reported cross reactivity suggests that a switch to warfarin may be safest.

Saturday Poster #73

Category: Clinical Vignette

Program: St. Joseph Mercy – Oakland

Program Director: Geetha Krishnamoorthy, MD, FACP

Presenter: Ambreen Malik

Additional Authors: Beverly Nyokabi, Katie Zechar, Geetha Krishnamoorthy

Vitamin D Supplementation in Sarcoidosis: Not so Simple or Safe

Sarcoidosis is a multi-system disease with non-caseating granulomas. Hypercalcemia in sarcoidosis is due to increased activity of alpha 1-hydroxylase in the macrophages, which converts 25 OH-vitamin D to 1, 25 OH-vitamin D. Unlike in normal individuals, this conversion is independent of PTH regulation. This leads to increased calcium absorption from the gut and kidney and increased calcium reabsorption from the bones leading to hypercalcemia. One of the manifestations of hypercalcemia is acute pancreatitis. The mechanism is deposition of calcium in pancreatic duct and activation of trypsinogen by calcium. We are presenting a rare case of hypercalcemia induced pancreatitis in a patient with untreated sarcoidosis who was taking vitamin D supplements.

A 34-year-old woman with a recent diagnosis of sarcoidosis presented with nausea, vomiting, abdominal pain, polyuria and constipation. She was not on any treatment for sarcoidosis. She started taking Vitamin D supplements 2 weeks before symptoms for back pain. On examination, she had epigastric tenderness. Laboratory evaluation: serum lipase: 780 U/L, serum calcium: 14.7 mg/dL and ionized calcium: 8.9 mg/dL. Acute pancreatitis due to hypercalcemia was diagnosed and she was started on hydration and intravenous calcitonin. Vitamin D supplements were discontinued; she was given prednisone, with resolution of hypercalcemia and pancreatitis.

Vitamin D should be given after pretesting and at a low dose of 400 IU/day for deficiency in sarcoidosis. Vitamin D supplement at a regular dose of 1000 IU/day and treatment of deficiency with 50,000 IU/week has been shown to cause hypercalcemia in sarcoidosis.

Saturday Poster #74

Category: CQI/EBM

Program: St. Joseph Mercy – Oakland

Program Director: Geetha Krishnamoorthy, MD, FACP

Presenter: Mohammed Salih

Additional Authors: Chirine El-mokdad MD, Monica Nicola MD FACP, Arezo Amirikia, MD, Geetha Krishnamoorthy, MD, FACP

Painful Diplopia and Ophthalmoplegia due to Orbital Myositis

Introduction:

Orbital myositis is a rare idiopathic inflammatory disorder of the orbital muscles and presents as a subacute painful diplopia. We present a case of orbital myositis.

Case Description:

A 31-year-old healthy man presented to the hospital due to diplopia, and painful eye movements.

Examination: Vital signs, physical examination, including neurological examination were normal. Eye appeared normal with normal pupillary response. Medial and lateral movements of both eyes were limited. There was pain with upward, medial and lateral gaze. Diplopia was present with downward gaze and he described the images as one above the other. Serum chemistries, thyroid stimulating hormone, complete blood count, and sedimentation rate were normal. C-reactive protein: 1.18 (normal: 0-.0.9). Antinuclear antibody was positive (1:320) without clinical features of SLE, creatinine kinase normal, negative Lyme serology. Magnetic Resonance Imaging (MRI) of the brain and orbits showed thickening and edema of bilateral medial rectus, left lateral rectus, and right inferior rectus muscles. Prednisone was started, and after 3 days, pain decreased, and eye movements improved. At 2 weeks, there was complete resolution.

Discussion:

The pathogenesis of Orbital myositis is not well understood. There are 2 major types: Limited Oligosymptomatic Orbital Myositis (LOOM), and Severe Exophthalmic Orbital Myositis (SEOM) with chemosis, ptosis and proptosis. The diagnostic study of choice is MRI of the orbits, which shows edema and swelling of the involved muscles. Disorders that may have similar eye findings (thyroid orbitopathy, ocular myasthenia gravis, sarcoidosis, Lyme disease) should be excluded. Orbital myositis responds to steroid, immunosuppressive agents may be needed

Saturday Poster #75

Category: Clinical Vignette

Program: St. Joseph Mercy – Oakland

Program Director: Geetha Krishnmoorthy, MD, FACP

Presenter: Emad Wahashi

Additional Authors: Waleed Khokher, Moayad Tarboush, Katie Zechar, Modar Alom

Undetected Splenic Artery Pseudoaneurysm Fistulating to the Stomach and Causing Massive GI Bleed; A Diagnostic Challenge

Splenic artery pseudoaneurysms (SAPs) usually arise in patients with active or chronic pancreatic inflammation. Hematochezia and hematemesis occur when an aneurysm forms a fistulous tract with surrounding GI lumen. CT angiograms (CTAs) have become key in diagnosing SAPs as they are less invasive and can detect most non-bleeding lesions. Our case is about a 59 year old female with a PMH of pancreatic pseudocysts (s/p surgical drainage) who presented with hematochezia, abdominal pain, and hemodynamic instability. During the hospital stay, she underwent a CTA, two colonoscopies, UGI endoscopy, and tagged RBC scan, all of which were negative for bleeding source. On hospital day 10, she had episodes of gross hematemesis and hematochezia with Hgb dropping to 7.1 and BP of 78/46. She was taken to the OR and an UGI endoscopy revealed active bleeding into the gastric lumen. Subsequent mesenteric angiography revealed a proximal SAP which was intraoperatively coiled. On the admission CTA, the SAP may have been missed due to metallic streak artifacts from a previous surgical clip near the SAP. The fistula between the gastric lumen and the SAP likely formed due to the chronic irritation from the staple which bridged the two structures. This case illustrates that SAPs can still be missed, despite use of CTA, due to artifact. SAPs should be considered in patients with GI bleeding in whom CTAs are negative, especially if the patient has a history of pancreatic pseudocysts or an abdominal surgery. Patients should be evaluated with mesenteric angiography during bleeding episodes

Saturday Poster #76

Category: Clinical Vignette

Program: St. Mary Mercy Hospital – Livonia

Program Director: David Steinberger, MD, FACP

Presenter: Ariful Alam

Additional Authors: Nabil Sultani, MD; Sangeetha Nanthabalan, MD.

Elevated Serum Transaminases: A Red-Herring in the Diagnosis of Idiopathic Inflammatory Myopathy (IIM)

Elevation of serum transaminases (AST and ALT) is generally thought to represent hepatocellular injury. However, transaminases are also important intracellular components of other organs.

77-year-old male presented with complaints of proximal skeletal muscle weakness, particularly, bilateral lower extremities, which progressively worsened over 3-4 weeks. He had difficulty walking up steps or standing from squatting position. He had bilateral shoulder weakness and pain in all extremities. He also described dysphagia with liquid. He had elevated serum transaminases, which has progressively increased over one year. Since patient was on simvastatin, it was initially thought to be the cause of lab abnormality and symptoms. However, due to chronically elevated LFT, he underwent extensive liver workup, including MRI, ultrasound and CT-guided liver biopsy, which did not suggest any hepatocellular pathology.

Due to progressive nature of symptoms, he underwent lumbar puncture for CSF analysis to rule out Guillain-Barre Syndrome. Furthermore, MRI of lower extremities showed significant inflammatory pathology of the muscles and serum CK was elevated at 5447. Muscle biopsy from quadriceps was suggestive of severe inflammatory myopathy, and diagnosed with polymyositis.

Multiple studies have shown a positive correlation between levels of serum CK and transaminases: CK and AST ($\rho = 0.76$); CK and ALT ($\rho = 0.7$). A retrospective study also demonstrated a linear relationship between log serum CK and log ALT.

In conclusion, appropriate recognition of these laboratory changes in IIM may help reduce unnecessary hepatic evaluation, delayed diagnosis, unnecessary avoidance of second-line immunosuppressants and misdiagnosis of primary liver disease.

Saturday Poster #77

Category: Clinical Vignette

Program: St. Mary Mercy Hospital – Livonia

Program Director: David Steinberger, MD, FACP

Presenter: Danekka Loganathan

Additional Authors: Gunjan Shah, MD

A Rare Cause of Portal Vein Thrombosis

Hormone therapy is the mainstay adjuvant therapy for patients with estrogen receptor positive early stage breast cancer. Anastrozole is generally considered to have lower risk of venous thromboembolism compared to tamoxifen, albeit not negligible.

81-year-old female with history of breast cancer on anastrozole presented to the hospital with high-grade fever. Physical exam was significant for RUQ tenderness. Her labs were significant for elevated transaminases, ALP and direct hyperbilirubinemia without leukocytosis. US abdomen showed enlarged gallbladder with stones. MRI was positive for portal vein thrombosis in the main portal vein and extending into right portal vein, with possible central anterior segment of right liver lobe infarct. She had no history of liver disease or venous thromboembolism. There is no clinical or radiological evidence of recurrence of malignancy. Patient was started on anticoagulation and was discharged on apixaban. APLA testing is pending and hypercoagulability workup was otherwise negative. It was concluded that the portal vein thrombosis was secondary to anastrozole due to lack of alternative etiologies. To our knowledge, our case of hepatic portal vein thrombosis suspected to be secondary to anastrozole therapy is the first to be reported in the medical literature. A case report suggesting a causal association between pulmonary embolism and anastrozole in a patient with no prior VTE and negative hypercoagulable workup was published in 2006 by Lycette et al. It is particularly important to consider the causative role of Anastrozole in patients with otherwise unexplained venous thromboembolism in unusual vascular beds as seen in our patient.

Saturday Poster #78

Category: Clinical Vignette

Program: St. Mary Mercy Hospital – Livonia

Program Director: David Steinberger, MD, FACP

Presenter: Rahul Pansare

Additional Authors: Soney Basnyat, Nupur Shah, Hiba Khan, Maria Sturla

Don't be Cocci: An Ailing Heart as a Sequelae to an Unhealthy Liver

Introduction: Streptococcus infantarius subsp. infantarius (S.infantarius) has been recovered from traditionally fermented dairy and plant products. We report a case where we stumbled upon S.infantarius bacteremia and native aortic valve endocarditis.

Case: 66-year-old gentleman present with acute lower back pain. He had never seen a doctor in 10 years. Physical examination showed an obese male (445lbs), hypoxia on room air but negative for back tenderness. Labs were significant for AST 45, ALT 25, total bilirubin 2.2. CT spine showed lumbar spondylosis. CT chest angiography ruled out PE but showed liver cirrhosis, confirmed by liver ultrasound. Echo showed normal EF and severe pulmonary artery hypertension. Patient later developed multiple febrile episodes upto 103.4 F necessitating blood cultures and antibiotics. CT abdomen ruled out occult abscess. Blood cultures grew S.infantarius. Colonoscopy and MRI spine could not be performed due to ongoing back pain and weight constraints. TEE revealed 1.17cm aortic valve vegetation. Cardiology recommended conservative management. Patient was discharged with 4 week antibiotic course after which his back pain resolved.

Discussion: S.infantarius is a Group D. Streptococci (GDS) and is a rare cause of native valve endocarditis. Liver cirrhosis has been associated with S.infantarius bacteremia possibly due to compromised reticuloendothelial system. This mandates workup with TEE to rule out endocarditis and colonoscopy to rule out colon cancer. In a report of 30 cases of GDS endocarditis, all 23% who had imaging evidence of spine involvement had presented with signs and symptoms of discitis which could not be ruled out in our patient.

Saturday Poster #79

Category: Clinical Vignette

Program: St. Mary Mercy Hospital – Livonia

Program Director: David Steinberger, MD, FACP

Presenter: Jonathan Paul

Additional Authors: Zarak Khan, Michael Reynolds

Mindless Wakefulness: A Case of Akinetic Mutism in a Patient with a Baclofen Pump

Introduction

Akinetic mutism is an uncommon state of muteness and general unresponsiveness with inability to perform simple motor functions. Patients have preservation of alertness, sensory abilities and at least some fundamental cognitive abilities.

Case presentation

A 59-year-old male presented to the ED with encephalopathy. PMH was significant for lumbosacral spinal stenosis s/p intrathecal baclofen pump insertion. A pump leak was repaired 3 days prior. Prior to ED arrival, the patient was moaning and thrashing on the floor and was unable to stand. In the ED he was bradycardic, BP was 102/62 mm Hg and other vitals were normal. Patient was eventually intubated for airway protection. CT head was negative. Patient transferred to ICU. Baclofen pump rate was decreased by 50%. Patient was successfully extubated on hospital day 4. He was arousable with intact extraocular movements but was unable to speak or move his extremities. EEG was normal. On hospital day 5 he was alert and oriented, followed commands and was able to converse. His motor function improved and he was discharged home.

Case discussion

Akinetic mutism is an uncommon condition which may occur even with low dose intrathecal Baclofen administration. Rubin et al suggested that the EEG findings of generalized or periodic sharp waves may implicate baclofen as the causative agent. In our patient EEG was performed after clinical improvement and extubation which may have contributed to the normal EEG findings. Akinetic mutism in our patient and in others cited in the literature was reversible after discontinuing baclofen.

Saturday Poster #80

Category: Clinical Vignette

Program: St. Mary Mercy Hospital – Livonia

Program Director: David Steinberger, MD, FACP

Presenter: Mansi Singapori

Additional Authors: Dr. Yasir Farah

Rare Case of Cowden Syndrome

Introduction:

Cowden syndrome is a rare autosomal dominant inherited complex disorder with a prevalence of 1 in 250,000. It manifests with various hamartomatous growths of multiple organs. In 80% cases, the human tumor suppressor gene, phosphatase and tensin homolog (PTEN) is mutated.

Case Presentation:

A 39-year-old female with past medical history of Cowden syndrome and PTEN-related breast cancer status post chemotherapy, radical mastectomy, and radiation presented with vision changes for one week. She described her visual changes as bilateral “tornadoes”. It was associated with a constant sensation of the room spinning. She also had a one-day old headache in the bifrontal area in a bandlike distribution with pressure like pain that fluctuated from mild to severe. She denied any fever, floaters, flashes, diplopia, and weight changes. Family history consisted of mother diagnosed with breast cancer. Both vitals and labs were unremarkable. Physical exam was significant for left homonymous hemianopsia. MRI Brain was obtained which confirmed widespread metastatic disease throughout the brain causing significant cerebral edema. Her symptoms were secondary to brain metastasis. Patient was started on Decadron and Kepra. Upon discharge, her treatment plan consisted of radiation.

Discussion:

Cowden syndrome is a cancer predisposition syndrome with an increased risk of developing malignancy in many tissues but especially breast, thyroid, and endometrium. Therefore, these patients need close monitoring for cancer surveillance and provide the opportunity to have genetic testing in order to assist them in making medical management decisions. Hence, the importance for clinicians to recognize this rare syndrome.

Saturday Poster #81

Category: Clinical Vignette

Program: Wayne State University – Detroit

Program Director: Jarrett Weinberger, MD, FACP

Presenter: Nabil Al-Kourainy

Additional Authors: Patrick Yousif, DO., Rana Ismail, PhD., Luis Afonso, MD.

A Rare Case of Isolated Pneumococcal Pulmonary Valve Endocarditis with Septic Emboli and Multiorgan Failure

Isolated pulmonary-valve endocarditis (PVIE) is rare, accounting for less than 2% of all reported cases. Major risk factors include, intravenous drug and alcohol use disorders, sepsis and catheter-related infections. PVIE due to streptococcus pneumoniae is extremely uncommon. We report a case of isolated PVIE complicated by septic shock, pulmonary emboli and multiorgan failure. A 50-year-old male with a history of HIV1, pulmonary hypertension, cor pulmonale and intravenous heroin use was admitted for septic shock and multiorgan failure secondary to streptococcus pneumoniae bacteremia. Cardiology was consulted following echocardiographic (TTE) evidence of a large, highly mobile vegetation (1.09 cm x 1.15 cm) on the pulmonic valve with pulmonary regurgitation. CT-Thorax revealed septic pulmonary emboli with pleural effusion. The patient was determined to be a non-surgical candidate. Following a course of vancomycin and status-post thoracenteses, he was discharged in stable condition to a long-term acute care hospital. A few days later, he was readmitted with septic shock, and developed compartment syndrome of the left proximal forearm. Despite initial clinical improvement, he experienced refractory shock, coded and expired.

The majority of cases with PVIE present with sepsis, as opposed to more classical features of non-PVIE. The diagnostic yield of TTE is comparable to Transesophageal echocardiogram (TEE) and when correlated clinically, is sufficient for diagnosis. Empiric treatment should include coverage for staphylococci and streptococci species. Surgery may be considered in cases with lack of antibiotic response within two weeks, recurrent septic emboli, septic shock, as well as renal and hepatic failure and secondary multivalvular endocarditis.

Saturday Poster #82

Category: Clinical Vignette

Program: Wayne State University – Detroit

Program Director: Jarrett Weinberger, MD, FACP

Presenter: Syed Umer Mohsin

Additional Authors: Hammad Ali MD, Marvin Kajy MD, Muhammad Usama MD, Anna Dewan MD

A Rare Case of Acute Motor Axonal Neuropathy due to Campylobacter Jejuni in Bone Marrow Transplant Patient

Guillain-Barré syndrome is an established complication of Campylobacter Jejuni (C. Jejuni) infection. There is limited data on Acute Motor Axonal Neuropathy (AMAN), a pure motor variant of GBS secondary to C. Jejuni infection in BMT patients. Here, we report a case of a 25-year-old allogenic BMT patient who developed rapid AMAN with positive anti-GM1 antibody and evidence of C. Jejuni.

The patient presented to the hospital with complaints of inability to stand and upper extremity weakness. The symptoms started as weakness in distal legs 2 days ago. He denied any sensory abnormality or change in bowel or bladder function. On physical exam, 1/5 strength and areflexia were noted in upper and lower extremities with intact sensory system. Stool cultures were positive for C. Jejuni. CSF studies were negative except for lymphocyte predominance with high protein.

MRI of brain and spine showed diffuse enhancement of cervical and cauda equina nerve roots. Electromyography was suggestive of acute diffuse pure motor polyradiculoneuropathy with the absence of classic primarily demyelination features. These findings were consistent with AMAN. Serum antiGM1 IgM-IgG was positive, which confirmed the diagnosis of AMAN and indicated the prognosis of more than one-year recovery time. Patient's weakness progressed, involving respiratory muscles requiring ventilatory support. During his hospital course, he received a course of Azithromycin for C. Jejuni and six sessions of IVIG for AMAN. As medicine evolves, more patients will be undergoing BMT. We have to be mindful of GBS and its variants in such patients.

Saturday Poster #83

Category: Clinical Vignette

Program: Wayne State University – Detroit

Program Director: Jarrett Weinberger, MD, FACP

Presenter: Deya Obaidat

Additional Authors: Hammad Ali, Salina Faidhalla, Housam Sarakbi

HSP in an Elderly Female Triggered by COPD Exacerbation

Henoch-Schoenlein Purpura (HSP) is an IgA mediated vasculitis affecting children however, few cases reported in adults. Classic triad: palpable non-thrombocytopenic purpura, abdominal pain, and arthritis. Additionally, varying renal involvement with severe outcomes in adults. A 62-year-old female who presented with shortness of breath and rash, denied abdominal pain or arthralgia. Examination revealed diffuse wheezing, palpable purple, non-blanchable purpura on both upper and lower extremity sparing the mucous membranes. Urinalysis revealed 3+ blood with <2 red blood cells, 3+ proteinuria. Urine protein/creatinine ratio was in the nephrotic range with no Bence Jones protein detected. Skin biopsy revealed peri-vesicular inflammatory infiltrate with mild red blood cell extravasation. Kidney biopsy immunofluorescence showed glomerular mesangial IgA staining, suggestive of IgA nephropathy. During the hospitalization patient had abdominal pain with emesis; the abdominal x-ray was suggestive of partial intestinal obstruction. The patient met the EULAR criteria for HSP. Was treated with 7 days of prednisone 50mg daily, followed by a 14 days taper in light of the biopsy results. As a result, her rash began to fade away and proteinuria went down. COPD exacerbation was likely the culprit since we were unable to identify any of the usual triggers in our history, examination and laboratory investigations.

We have not come across COPD exacerbation triggering HSP with renal involvement in an adult, in our literature review. HSP is infrequent albeit more serious in adults, especially renal outcomes, hence the need to catch it early. There is a dearth of studies in the USA on this topic.

Saturday Poster #84

Category: Clinical Vignette

Program: Wayne State University – Detroit

Program Director: Eric Ayers, MD, FACP

Presenter: Selena Rodriguez Rivera

Additional Authors: Shivani Agrawal, Bibban Bant Deol

“It’s Never Lupus”, ...Until It Is: An Unexpected Cause for Renal Failure in an Elderly Male

Systemic lupus erythematosus (SLE) is a chronic inflammatory disease that can affect any organ. The classical presenting triad is fever, joint pain and rash in a woman of childbearing age. Lupus nephritis is rarely the presenting sign; however, it is histologically evident in most SLE patients. When present, the manifestations often include hematuria or proteinuria with related symptoms such as edema, coagulopathy, ascites, effusions and hypertension. We present the case of a 65-year-old male with multiple chronic conditions who was repeatedly hospitalized for non-specific complaints accompanied with a steady decline in renal function. He was started on hemodialysis and given the extent of his kidney disease; renal biopsy was obtained and consistent with membranous lupus nephritis. Upon obtaining biopsy results, further work-up performed showed positive ANA, anti-dsDNA and low complement levels. In the setting of a patient with proteinuria, hematuria, coagulopathy and renal failure, the diagnosis of SLE was made and patient started on treatment. Unfortunately, the patient expired during his hospitalization.

This case highlights the importance of complete evaluation of renal failure even in the presence of other attributable diseases. Less common causes should be considered, particularly if treatable. Severe lupus nephritis as presenting diagnosis is rare; however, this patient had subtle signs and symptoms of an autoimmune disease. Early investigations and diagnosis allows patients to start treatment in a timely manner avoiding morbidity/mortality while potentially changing disease course. Epidemiology of diseases is an important guiding factor; however, we should not have tunnel vision limiting us to textbook presentations.

Saturday Poster #85

Category: Clinical Vignette

Program: Wayne State University – Detroit

Program Director: Jarrett Weinberger, MD, FACP

Presenter: Hadeel Sahar

Additional Authors: Nada Al Masalmeh MD; Sushma Tatineni MD; Mira Mitry MD, Asif Alavi MD

Thrombotic Microangiopathy (TMA) Secondary to Tyrosine Kinase Inhibitor (Cabozantinib) a Case Report

Thrombotic microangiopathies are rare, life-threatening diseases¹ characterized by microangiopathic hemolytic anemia, thrombocytopenia and organ injury. A 74-year-old man with history of metastatic renal cell carcinoma to the lung, lymph nodes and bones. Patient has been taking Cabozantinib with stable disease for the last two years. He presented to the emergency room with jaundice and lethargy. Work up showed a hemoglobin of 7.1 grams, from a baseline of 8.4 g/dl, and a bilirubin of 2.8 mg/dl. Also found to have worsening of kidney function and thrombocytopenia. Hemolytic work up showed Coombs negative hemolysis, compatible with microangiopathic hemolytic anemia and peripheral blood smear showed numerous schistocytes. Hematology consulted and urgent plasmapheresis initiated and Cabozantinib discontinued. Patient got a total of six sessions with remarkable improvement clinically and laboratory wise. Patient discharged in a stable condition and Cabozantinib changed to everolimus, as it was the only explanation for his thrombotic microangiopathy. TMA has been reported with the use of Cabozantinib, early recognition is important, as it's associated with significant mortality and morbidity¹.

¹Clin J Am Soc Nephrol 13

Saturday Poster #86

Category: Clinical Vignette

Program: Wayne State University – Detroit

Program Director: Jarrett Weinberger, MD, FACP

Presenter: Muhanad Taha

Additional Authors: Weinberger Jarret , Soubani Ayman

Idiopathic Pulmonary Vein Thrombosis: A Case Report and Review of the Literature

Pulmonary vein thrombosis (PVT) is a rare but potentially serious condition. Known etiologies of PVT include intrapulmonary neoplasm, postoperative complications after lobectomy, lung transplantation, as a complication of radio-frequency ablation and hypercoagulable state. PVT can also be idiopathic. We found only eight cases of idiopathic PVT reported in literature. We described here a rare case of idiopathic pulmonary venous thrombosis (PVT) and we reviewed the previous cases reported in literature.

After reviewing the previous cases of idiopathic PVT and our case, we found that the presenting symptoms in the series are not specific but mostly chest pain and shortness of breath. Disease can occur in young and elderly. Males and females are equally affected. There are two reported complications related to idiopathic PVT: infarction of spleen and lung necrosis. CXR findings are not specific but may show infiltrate in lower lobes. Most of the cases diagnosed with using CTA including our case. Other modalities used to confirm diagnoses are transesophageal echocardiography (TEE) and cardiac gated magnetic resonance imaging (MRI). Most of thrombus occur in right or left lower pulmonary veins compared to upper pulmonary veins. The appropriate treatment for PVT remains unclear but Oral anti-coagulation appears to be the proper treatment. Duration of anticoagulation is unknown but among the eight cases, three had repeated CTA done; One of them showed resolution of thrombus after 3 months but the other two cases showed only partial resolution after 2 months.

Saturday Poster #87

Category: Clinical Vignette

Program: Wayne State University – Detroit

Program Director: Jarrett Weinberger, MD, FACP

Presenter: Muhammad Usama

Additional Authors: Ania Fida MD, Syed Umer Mohsin MD MPH, Hammad Ali MD, Fazal I Raziq MD, Diane Levine MD.

Pituitary Under Fire: A Case Report of Ipilimumab Induced Hypophysitis and Review of Literature

Introduction:

Ipilimumab is an FDA approved Immunotherapy for the treatment of unresectable or metastatic melanoma. A limited number of ipilimumab-induced hypophysitis cases have previously been reported, and relatively little is known about this important treatment complication.

Case:

A 68-year-old man with stage III melanoma received adjuvant nivolumab for six cycles after resection with good tolerance. Nine months later, his melanoma recurred requiring additional immunotherapy with Ipilimumab. Post-initiation, he presented to the hospital with dizziness, fatigue, weakness, anorexia and decreased libido. Due to hypotension, sepsis was a concern, but infectious workup was negative. Lab work was suggestive of hypopituitarism including decreased levels of testosterone, AM cortisol, ACTH, TSH, FT4, and FT3. An MRI brain with pituitary protocol showed an increase in pituitary gland size with diffuse mild enhancement, concerning for pituitary hypophysitis. The patient was diagnosed with Ipilimumab associated hypophysitis. Hormone replacement therapy with thyroxine and hydrocortisone was started and Ipilimumab was discontinued. The patient has been doing well on outpatient visits.

Discussion:

Hypophysitis is a less identified but significant therapeutic side effect of Ipilimumab. Known risk factors are male gender and old age. Increase in pituitary size is sensitive and specific for immune hypophysitis in the appropriate setting and may precede clinical symptoms. Radiologic recovery is quick but functional recovery of the anterior pituitary is uncommon. In melanoma patients treated with Ipilimumab, presence of hypophysitis is a positive predictor of survival.

Saturday Poster #88

Category: Clinical Vignette

Program: Wayne State University – Detroit

Program Director: Jarrett Weinberger, MD, FACP

Presenter: Anshu Wadehra

Additional Authors: Moath Nassar MD, Ayman Soubani MD

A Case of Vanishing Lung Syndrome

Introduction: Vanishing Lung Syndrome (VLS), or giant bullous emphysema, is a progressive condition in which giant bullae compress the underlying lung, making it “disappear.” The bullae must occupy at least 1/3 of one or both hemi-thorax for diagnosis. Patients with this condition who present with dyspnea can be misdiagnosed to have pneumothorax and receive inappropriate treatment.

Case Description: A 58 year old man with history of COPD on home oxygen, tobacco use, and CAD presented with worsening shortness of breath and cough. On exam, there were decreased breath sounds over the left hemi-thorax, as well as hyperresonance to percussion. His pulse oximetry was 92% on 2L. A chest x-ray was significant for hyperlucency over the left hemi-thorax with mild shift of the cardiomedial silhouette to the right. Upon closer evaluation, it was noted the left lung consisted of large bullae, compatible with vanishing lung syndrome. The patient was further admitted and treated for an acute exacerbation of COPD.

Discussion: This case illustrates the importance of having a broad differential for a patient who present with acute, worsening dyspnea. Physical exam findings in patients with VLS often mimic that of a pneumothorax. However, radiologic studies help to differentiate both conditions. In VLS, the lung is usually compressed toward the cardio-phrenic angle. However, in a pneumothorax, the lung is collapsed toward the hilum. Chest CT scan is also helpful in making the diagnosis. Awareness of VLS as a clinical entity ensures appropriate care and avoiding potentially hazardous treatment such as thoracostomy tube.

Saturday Poster #89

Category: Clinical Vignette

Program: Wayne State University – IM – Rochester

Program Director: Sarwan Kumar, MD, FACP

Presenter: Ankita Aggarwal

Additional Authors: Anubhav Jain , Devashree Nadgauda, Zain Kulairi

Triple Anticoagulation/Antiplatelet Therapy Causing Heavy Menstrual Bleeding in a Premenopausal Female: A Therapeutic Dilemma

Introduction: Premenopausal women are usually at a lower risk of coronary artery disease (CAD) as compared to men. Over the last decade, there has been an increase in the incidence of CAD in premenopausal women along with atrial fibrillation. Dual antiplatelet (DAPT) and new oral anticoagulants (NOACs) being the first line treatment, when used in this group can theoretically increase the risk of heavy menstrual bleeding.

Case: Patient is a 45-year-old female with a past medical history of multivessel coronary artery disease s/p CABG and recent PCI with DES placed in the graft a week ago. She presented to the ED with new-onset atrial fibrillation. She was started on apixaban due to high CHADSVASC of 4. A month later she presented to ED with lightheadedness and heavy vaginal bleeding. Her initial gynecological workup and review of system was negative. She was tachycardic and had positive orthostatic vital signs. Initial labs showed hemoglobin level 5.1. Apixaban was held, uterine packing was done. She was transfused 3 units of PRBCs and 1 unit of FFP. After gynecology consult medroxyprogesterone was started. A decision was made to stop apixaban and continue DAPT.

Discussion: Premenopausal women have not been separately investigated or included in the drug trials such as ROCKET trial, ARISTOTLE trial, RELY trial. Due to the concerns of potentially significant adverse effects of triple therapy, a risk versus benefit analysis must be made and a guideline must be established on the management of stroke and stent thrombosis risk prevention in premenopausal women.

Saturday Poster #90

Category: Clinical Vignette

Program: Wayne State University – IM – Rochester

Program Director: Sarwan Kumar, MD, FACP

Presenter: Laith Al-Janabi

Additional Authors: Ankita Gandhi

A Rare Case of Lemierre's Syndrome; A Special Form of Descending Necrotizing Mediastinitis (DNM)

Descending necrotizing mediastinitis caused by anaerobic bacteria fusobacterium necrophorum known as Lemierre's syndrome, which presents as an acute oropharyngeal infection with life threatening septic thrombophlebitis of the internal jugular, and or subclavian veins and metastatic abscesses.

Lemierre's syndrome is now a rare condition with an incidence of 3.6 cases per 1 million per year. This syndrome should be suspected in young healthy patients with acute or prolonged symptoms of pharyngitis with sepsis.

This is a 32 years old male presented with left ear pain, dysphagia, fever, chills of three days. Patient was started on Ampicillin/sulbactam. CT scan of the neck; showed left pharyngitis/tonsillitis with soft tissue swelling and phlegmon. Patient had a bedside incision and drainage. Within 24 hours patient was sent home with five days course of antibiotic. However, patient returned to the ED in 2 days with worsening neck pain. Patient had a repeat CT neck which showed multiple abscesses starting from cervical area to the mediastinum with signs of necrotizing fasciitis. Patient was transferred to the tertiary care center where he was also found to have L subclavian vein septic thrombophlebitis filled with pus. Patient was started on piperacillin/tazobactam and taken to the OR for debridement.

This is a rare illness in the modern era of antibiotic therapy, though it has been reported with increasing frequency in the 21 century. The current mortality is estimated to be between 5% and 18%, depending on the source of the data. Prolonged antibiotic therapy is the cornerstone of treatment.

Saturday Poster #91

Category: Clinical Vignette

Program: Wayne State University – IM – Rochester

Program Director: Sarwan Kumar, MD, FACP

Presenter: Ankita Gandhi

Additional Authors: Ankita Gandhi M.D., Daymon Peterson M.D., Fenil Patel M.D., Zain Kulairi M.D.

A Young String Instrument Player with Paget-Schroetter Syndrome

Introduction

One of the rare diagnoses of primary upper extremity deep vein thrombosis (DVT) in the general population is Paget-Schroetter. It is characterized by thrombosis of upper extremity deep veins related to vascular stasis in the setting of prolonged or recurrent activity related trauma. External force or muscle hypertrophic changes can affect the thoracic outlet, causing compression of the axillo-subclavian vasculature and subsequently leading to venous thrombosis.

Case

A 26-year-old Caucasian female who is a lifelong and active Cello player in a local band presented to the emergency department with four days of progressively worsening pain and redness of her right upper extremity. Venous duplex of the extremity confirmed DVT's involving the subclavian and radial veins. Extensive investigation for secondary etiologies was nondiagnostic. Her recent extended periods of Cello playing resulted in external vascular compression, as well arm posture that compromised poor venous clearance, and Paget-Schroetter Syndrome was diagnosed.

Conclusion

When a young and otherwise healthy patient presents with an upper extremity DVT, standard workup should include evaluation for a secondary explanation such as malignancy and hypercoagulability. In their absence, a clinician should consider Paget-Schroetter syndrome, especially in the setting of repetitive musculoskeletal activities, or recurrent trauma related to work and leisure. Usually, the treatment is six months of anti-coagulation unless the patient has associated complications such as lymphedema. This report is intended to raise awareness and knowledge of a rare circumstance of DVT in the upper extremities.

Saturday Poster #92

Category: Research

Program: Wayne State University – IM – Rochester

Program Director: Sarwan Kumar, MD, FACP

Presenter: Mishita Goel

Additional Authors: Rajiv S Varandani, Mohammad Fityan, Tochukwu M Okwuosa

Resistance to Antihypertensive Drugs Targeting the Renin Angiotensin Aldosterone System in Cancer Patients: A Case Series

Background: Hypertension is one of the most common comorbidities reported in cancer patients. Chemotherapeutic agents, especially vascular signaling pathway inhibitors are known to worsen or cause de novo hypertension, and this impacts prognosis in cancer patients. Management of hypertension involves lifestyle modifications and pharmacotherapy that includes diuretics, Angiotensin-converting enzyme inhibitors (ACEi) or Angiotensin Receptor Blockers (ARBs), beta blockers and calcium channel blockers as first line drugs. However there are no specific recommendations for treatment of hypertension in cancer patients.

Methods: We conducted a retrospective chart review of patients presenting to our cardio-oncology clinic over a 5 year period. We included adult cancer patients with uncontrolled hypertension on ACEi and/or ARBs despite a normal renal artery duplex scan. The mean of 3 blood pressure readings spaced over 2 weeks before starting the ACEi/ARBs for hypertension, after starting it, following any dose change and after their discontinuation were recorded.

Results: Blood pressures for all five cancer patients with uncontrolled hypertension improved to normal upon discontinuation of ACEi/ARBs. Thus, resistance to antihypertensive agents targeting renin angiotensin aldosterone system (RAAS) was seen in our cancer patients.

Conclusion: Our clinical experience shows suboptimal blood pressure lowering effects with ACEi/ARBs in a number of our cancer patients. Peripheral arterial vasodilators like hydralazine and dihydropyridine calcium channel blockers are sometimes more effective in managing hypertension in these patients. In conclusion, efficacy of drugs targeting RAAS for blood pressure control in cancer patients on active therapy is still unclear; thus further clinical studies evaluating the same are required.

Saturday Poster #93

Category: Research

Program: Wayne State University – IM – Rochester

Program Director: Sarwan Kumar, MD, FACP

Presenter: Anubhav Jain

Additional Authors: Ankita Aggarwal MD, Kristen Hughes MD, Mulham Shikh Hamdon MD, FNU Sourabh MD, Manishkumar Patel MD,

Comparing Efficacy and Safety of Verapamil Versus Diltiazem in Atrial Fibrillation and Flutter with Rapid Ventricular Response

Introduction: Verapamil and diltiazem are the two calcium channel blockers which are used interchangeably. Current ACC/AHA guidelines do not differentiate and consider both medications as first-line for Afib with RVR (class I, level A).

Hypothesis: Verapamil being more potent negative inotrope, may cause early rate control compared to diltiazem.

Methods: 200 patients admitted with Afib with RVR were divided into 2 groups, based on whether they received verapamil or diltiazem drip. Patients with acute coronary syndrome, who underwent electrical or chemical cardioversion were excluded. The primary endpoints were the time required for rate control and the mean heart rate achieved. The secondary end-point was spontaneous cardioversion achieved. Safety of the drugs was compared in terms of rate of hypotension and recurrence of RVR.

Results: Final analysis had 120 patients with 60 patients in each group. They had comparable baseline characteristics. Average time for rate control was less with verapamil as compared to the diltiazem (23hr vs 27hr, p-value 0.1). Better control of heart rate (<80bpm vs 80-100bpm) was achieved in the verapamil group (50% vs 14%, p-value 0.002). These result remained significant in multiple linear regression. More spontaneous cardioversion was achieved in the diltiazem group (11% vs 23%, p-value 0.09). There was no difference in the complication rates between the two groups.

Conclusions: Better heart rate control was achieved with verapamil without any significant difference in complication rate. Heart rate control was also achieved faster in Verapamil group by approximately 4 hours on average. This result though clinically significant, but it could not reach statistical significance.

Saturday Poster #94

Category: Research

Program: Wayne State University – IM – Rochester

Program Director: Sarwan Kumar, MD, FACP

Presenter: Mulham Shikh Hamdon

Additional Authors: Torib Uchel, Mannish Kumar patel, Victoria Gonzales, Lina messo, Sarwan Kumar

Fluid Resuscitation in CHF Patients Presenting with Sepsis

Sepsis and septic shock are life-threatening conditions in which the cardiovascular system plays a major role in pathophysiology and treatment. Physicians are often hesitant to administer liberal amounts of fluid according to guidelines, 30 cc/kg/3h, in fear of exacerbating heart failure in patients with underlying congestive heart failure (CHF). No studies have shown any evidence in liberal versus restrictive (< 30 cc/kg/3h) IVF resuscitation in managing sepsis or septic shock in patients with underlying systolic or diastolic CHF. The purpose of this study is to determine the best IVF resuscitation method in patients presenting with sepsis or septic shock with history of CHF.

We conducted a single center retrospective cohort study evaluating patients with diagnosis of sepsis or septic shock with underlying compensated diastolic or systolic CHF. All patients but were divided into 2 groups: liberal IVF versus restrictive IVF resuscitation.

Primary outcome of interest is the incidence of endotracheal intubation while secondary outcomes were mortality, length of stay (LOS), and 30-day readmission.

Our study shows that septic patients who received liberal IVF resuscitation were 2.5-times more likely to require endotracheal intubation. Patients with diastolic CHF were 3-times (restrictive) and 7-times (liberal) more likely to require intubation when presenting with sepsis compared to systolic CHF. Restrictive method resulted in 2-fold higher mortality in diastolic CHF

Saturday Poster #95

Category: Clinical Vignette

Program: Western Michigan University School of Medicine

Program Director: Joanne Baker, DO, FACP

Presenter: Ricardo De Castro

Additional Authors: Lima, Neiberg de Alcantara., Lino, Danielli Oliveira da Costa., Bannon, Susan F.

Acute Myocardial Infarct Uncovering Concealed Wolff-Parkinson-White

A 57-year-old man with a past medical history significant for diabetes mellitus and hypertension presented to the emergency department (ED) complaining of anterior chest pain that started at rest, associated with nausea and vomiting. In the emergency department vital signs were stable. He had an electrocardiogram (EKG) done showing ST elevation in leads II, III and aVF and a diagnosis of acute myocardial infarction (MI) was made. Patient was started on aspirin and clopidogrel and underwent a heart catheterization where a drug-eluting stent was placed in his occluded right coronary. A post-procedure EKG showed negative T waves in inferior leads and a surprising new short PR interval and a wide QRS complex with a slurred waveform in the early part of QRS compatible with a delta wave of Wolff-Parkinson-White (WPW). Patient became asymptomatic and was discharged home for further outpatient medical management. WPW syndrome is a conduction disturbance in which atrial impulses are transmitted to the ventricle by an accessory pathway to normal atrioventricular conduction. Usually, WPW syndrome simulates or masks the electrocardiographic abnormalities of acute MI. However, it is extremely uncommon to find the opposite situation: an acute MI revealing a concealed WPW. There are only a few cases described in the literature of this interesting association. This case is rare and shows a concealed WPW uncovered by an acute coronary syndrome in a previously asymptomatic patient.

Saturday Poster #96

Category: Clinical Vignette

Program: Western Michigan University School of Medicine

Program Director: Joanne Baker, DO, FACP

Presenter: Abhinav Garg

Additional Authors: Tooba Tariq MD, Melissa Olken PhD MD

Myositis Associated ILD: Antisynthetase Syndrome Overlap with SLE and Sjogren's Syndrome

Anti-synthetase syndrome (ASS) is characterized by inflammatory myositis associated with interstitial lung disease, arthritis and skin findings which include mechanic's hands. Patients with this syndrome are positive for anti-synthetase antibodies particularly anti-Jo. We report an unusual case that highlights the heterogeneity of a rare clinical entity, ASS overlapping with systemic lupus erythematosus (SLE) and Sjogren's syndrome (SS). A 56-year-old African woman presented with progressive dyspnea for two months, gradual swelling of her hands and feet, generalized myalgias/arthralgias, gastroesophageal reflux and dry mouth. Clinical examination was significant for inspiratory crackles in bilateral lung bases, edematous appearance of hands and feet, evidence of synovitis in both wrists along with muscle tenderness/weakness in both upper and lower extremity muscles however proximal muscles more than distal muscles. Laboratory investigations showed positive ANA (>1:640, speckled) and rheumatoid factor (68 IU/mL). Auto-antibodies against extractable nuclear antigens were screened and were found to be positive for anti-Ro, anti-La, anti-Sm and anti-Jo auto-antibodies. High resolution CT of the lung showed patchy interstitial infiltrates involving the lower lobes suggestive of interstitial lung disease. Muscular investigations included creatine phosphokinase level of 2900 IU/L and aldolase of 35 IU/L. Electromyography showed myopathy and muscle biopsy was consistent with polymyositis. A diagnosis of anti-synthetase syndrome was made and immunosuppressive treatment was initiated with high dose steroids at 1 mg/kg/day. Gradually, steroids were titrated down and replaced by azathioprine (upto a dose of 150 mg/day). The current patient was diagnosed with anti-Jo positive ASS and was remarkable for demonstrating findings of both SLE and Sjogren's syndrome.

Saturday Poster #97

Category: Clinical Vignette

Program: Western Michigan University School of Medicine

Program Director: Joanne Baker, DO, FACP

Presenter: Muhammad Ebad Rehman

Additional Authors: Miller AR, Mersfelder TL, Patel P

Flecainide-Induced Myalgias: A Rare, but Important Adverse Reaction

INTRODUCTION: Flecainide is an anti-arrhythmic used in patients with symptomatic arrhythmias without structural heart anomalies. It is known to cause several non-cardiac adverse reactions, most commonly headaches, dizziness, fatigue and nausea. We report a case of symmetric polymyalgia, a rare side effect of flecainide.

CASE REPORT: A 62 year-old woman with history of atrial fibrillation presented with chest heaviness and generalized myalgias. 5 days prior to her presentation, she underwent a cardiac ablation and was started on flecainide 150 mg twice daily. Her other home medications included furosemide, carvedilol, dabigatran, losartan and aspirin. Vital signs were stable. Pertinent exam findings included tenderness to palpation over bilateral calf muscles, muscle strength 3/5 in bilateral flexor and extensor muscles of hip and knee joints and absent bilateral knee and ankle reflexes. EKG showed normal rate and rhythm. ESR and CRP were elevated with a normal ANA and creatinine kinase. The Naranjo score of 7 suggested a probable cause for flecainide-induced myalgias. Flecainide was discontinued leading to improvement in muscle weakness and reflexes at the time of discharge. At follow-up visits, her symptoms completely resolved.

DISCUSSION: Antiarrhythmics are commonly used medications with cardiac and non-cardiac adverse effects. Flecainide-induced adverse effects are dose dependent. In dose ranging studies, increasing flecainide dosages caused significant myalgias, especially in patient taking 300 mg/day. In the appropriate clinical context, healthcare providers should be aware of this rare, reversible adverse effect, to prevent extensive inflammatory or neuromuscular disease workup. As our case illustrates, early discontinuation of flecainide can resolve myalgias and prevent long-term sequelae.

Saturday Poster #98

Category: Clinical Vignette

Program: Western Michigan University School of Medicine

Program Director: Joanne Baker, DO, FACP

Presenter: Faizan Shaikh

Additional Authors: Prashant Patel D.O., Thomas Flynn M.D.

A Valve That Suddenly Leaked - Chordal Rupture from Infective Endocarditis

INTRODUCTION:

Most internists are familiar with infective endocarditis (IE) and related complications including heart failure, stroke, mycotic aneurysms, and arrhythmias. If undiagnosed, IE and its sequelae can cause high in-hospital mortality (14-22%). Our case highlights chordae tendinae rupture (CTR) as a presenting complication of IE.

CASE DESCRIPTION:

A 50 year old man with history of seizures presented to the emergency department after motor vehicle accident in a post-ictal state. Upon arrival, his temperature was 39.4°C but otherwise remained hemodynamically stable. Physical examination was remarkable for 2/6 holosystolic murmur at the left sternal border, but otherwise unremarkable for stigmata of IE. Two sets of blood cultures were positive for *Staphylococcus aureus*. Empiric vancomycin was started which was subsequently deescalated to cefazolin after oxacillin sensitivity was observed. Transesophageal echocardiogram (TEE) revealed moderate to severe mitral regurgitation and mitral valve prolapse (MVP) with CTR without any obvious vegetation. The source of bacteremia remained unknown despite investigation. The patient was treated with parenteral cefazolin for 6 weeks for presumed MSSA IE. He was discharged home on parenteral antibiotics, with follow up TEE planned in 2 weeks.

DISCUSSION:

TEE has sensitivity of 93-100% in detecting vegetations in IE. CTR has multiple etiologies which include ischemia, trauma, MVP, and IE. As our case highlights, management differs greatly based on the etiology of CTR, thus, high index of clinical suspicion for IE should be maintained in patients who fulfill clinical criteria and have positive blood cultures for a typical organism, yet have absence of vegetations on TEE.

Saturday Poster #99

Category: Clinical Vignette

Program: Western Michigan University School of Medicine

Program Director: Joanne Baker, DO, FACP

Presenter: Wasif elahi Shamsi

Additional Authors: Muhammad Ebad Ur Rehman, Khushbo, Kevin Kavanaugh

Hydralazine Induced Vasculitis : A Case of Rapidly Progressive Glomerulonephritis Secondary to Hydralazine Use

Hydralazine has long been used for hypertension as a 2nd or 3rd line anti-hypertensive. Rarely, hydralazine use can lead to autoimmune vasculitis and subsequent rapidly progressive glomerulonephritis (RPGN).

A 79-year-old female, with past medical history of hypertension, presented with lower abdominal pain and hematuria. Patient had a history of uncontrolled hypertension and had been on hydralazine, losartan and amlodipine for the past one year. Patient was tachycardic but vitally stable otherwise on presentation. Physical exam revealed a soft and nontender abdomen with normoactive bowel sounds. Lab work up revealed that the patient was anemic with a hemoglobin of 6.5 and had acute kidney injury (AKI). Patient required blood transfusion for the anemia. She was scheduled for renal biopsy and was started empirically on solumedrol because of concern for hydralazine-induced vasculitis. Lab work also revealed her to be positive for ANA and ANCA. Subsequent biopsy results showed RPGN. Patient's kidney function stabilized and recovered, and she did not require hemodialysis support. She was discharged on a tapering course of prednisone and was asked to avoid taking hydralazine in the future.

Hydralazine induced RPGN can progress rapidly and lead to patient becoming dependent on hemodialysis. Concerning symptoms of hematuria or AKI, as in this case, should prompt the start of empiric treatment with steroids before definitive biopsy results are acquired. This can prevent progression to acute kidney failure. Furthermore, treatment of hypertension with hydralazine should only be sorted as a last resort due to the risk associated with its use.