

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 1

Presenter: Jeremy Aguinaldo

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Program Director: Vivek Kak, MD, FACP

Hepatopulmonary Syndrome (HPS)

Introduction: Hepatopulmonary Syndrome (HPS) is a progressive disorder involving abnormal oxygenation due to intrapulmonary vascular dilations commonly seen in patients with chronic liver disease or severe acute hepatitis. This syndrome carries a poor prognostic value. We are presenting a case of HPS in a patient with early compensating cirrhosis. Case: A 62-year-old male with a history of Hepatitis C induced cirrhosis, was sent by his primary care physician because of hypoxia. The patient has been complaining of progressive dyspnea for the last year with increased fatigue over the last month. Further examination revealed both platypnea and orthodeoxia. In the ED, the CT angiogram of the chest was negative for any acute intrathoracic abnormalities. CT of the abdomen revealed mild ascites and evidence of portal hypertension with severe varicosities throughout the upper abdomen. The patient was required 3L of Oxygen to maintain Pulse oximetry above 90%. An echocardiogram with bubble study revealed an ejection fraction of 57% and late appearing agitated bubbles in the left atrium and ventricle after five cardiac cycles confirming an intra pulmonary shunt. A diagnosis of Hepatopulmonary Syndrome was made, and the patient was discharged home on oxygen supplement with referral to tertiary center for potential liver transplant. Conclusion: HPS is a serious complication in patients with chronic liver diseases, despite the possible low MELD score, these patients have higher mortality rates. Internists should be aware of this potential disorder since early detection can lead to higher chance of recovery after liver transplant.

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Poster Presentation No. 2

Presenter: Faria Ali

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A Rare and Newly Recognized Kaposi Sarcoma Herpesvirus-Associated Disease

Kaposi sarcoma herpesvirus (KSHV) is associated with Kaposi sarcoma, primary effusion lymphoma and multicentric Castleman disease (KSHV-MCD) in patients infected with human immunodeficiency virus (HIV). We present a case consistent with a newly recognized KSHV inflammatory cytokine syndrome (KICS), distinct from KSHV-MCD.

A 33-year-old African American male with a prior history of syphilis, HIV/AIDS on Triumeq and stage IV Kaposi sarcoma on Doxorubicin, presented with worsening fatigue, nausea, vomiting, myalgias, dyspnea and anasarca. His CD4 count remained at 33 cells/ μ L, despite a low HIV-1 viral load. He was febrile and treated with multiple antibiotics, while extensive workup with cultures ruled out infectious causes. He had persistent hyponatremia, hypoalbuminemia, and then developed anemia and thrombocytopenia. Biopsy of his lymph node excluded KSHV-MCD. His significantly increased C-reactive protein and the absence of lymphadenopathy/splenomegaly on CT images led to the suspicion of KICS. KICS was further confirmed by high KSHV PCR (14855 copies/ml) and massive elevation of cytokines IL-6 and IL-10. Even with aggressive immunoglobulin therapy and supportive treatments, he died of multi-organ failure one month later.

Although both disorders exhibit signs of substantial inflammation, KICS is a different entity from KSHV-MCD. KICS is defined with no lymphadenopathy/splenomegaly and negative pathologic nodal changes in the setting of low CD4 count (<100 cells/ μ L). Standard therapy is still under investigation due to its rarity and high mortality, whereas a combination treatment of Rituximab and Doxorubicin may lead to clinical remission. Early diagnosis and treatment initiation are crucial to improve survival of this under-recognized KSHV-associated disease.

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Poster Presentation No. 3

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Solitary Plasmacytoma of the Sacrum: A Case Report

Solitary bone plasmacytoma (SBP) is a localized mass of neoplastic monoclonal cells in the absence of systemic plasma cell proliferation disorder. 50-60% of patients eventually progress to overt multiple myeloma after initial radiotherapy. SBP typically presents with back pain and pathologic fracture. We present a case of SBP in a 59-year-old male with a past medical history of mild intermittent back pain since age 20, who presented with severe worsening of his back pain limiting his ability to sit or walk for the last 10 months, and numbness in his posterior thighs and toes with no muscle weakness or urinary or bowel incontinence. An MRI of his lumbar spine showed a 10.9x8.9x8.4 cm enhancing soft tissue mass completely replacing the sacrum. Biopsy showed plasmacytoma. Serum IgA was significantly elevated, and urine contained trace gamma light chain. Serum protein electrophoreses and immunofixation demonstrated IgA Kappa monoclonal protein. Bone marrow biopsy showed plasmacytosis <5%. Whole body imaging was negative for any other masses except for a small lung nodule. Patient was diagnosed with solitary plasmacytoma and started on treatment with radiation and chemotherapy.

SBP has a high predilection for the axial skeleton, most commonly affecting the thoracic vertebrae, followed by lumbar and sacral vertebrae. It comprises 5% of cases of plasma cell disorders, with a median survival rate of 10 years. The diagnosis is confirmed by a biopsy of the lesion that demonstrates clonal plasma cells, combined with the clinical picture and a normal bone marrow biopsy.

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Poster Presentation No. 4

Presenter: Zeeshan Arshad

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Is it Arthritis or Arthritidis?

Introduction

Nocardiosis is an uncommon Gram Positive bacterial infection caused by Aerobic Actinomycetes. Nocardia is not part of human flora, and is found worldwide in soil, decaying vegetable matter and aquatic environment. It can cause both localized and systemic disease. Usually Nocardiosis is an opportunistic infection but one third of cases are immunocompetent. Typical risk factors are Glucocorticoid therapy, Malignancy, HIV and Organ/ stem cell transplant.

Case

A 46 year old male patient presented with left hip and thigh pain for one month. Patient was recently diagnosed with Glioblastoma Multiforme of right temporal lobe s/p partial resection, XRT and chemotherapy about 3 months ago, currently on Bevacizumab and Decadron. Patient continued to have progressive left hip pain and received steroid injection in the hip joint without much relief. MRI of left thigh showed fluid collection within Vastus medialis muscle. On aspiration, purulent material was drained. Patient was started empirically on Daptomycin. Finally fluid cultures grew Gram positive bacilli which was later identified as Nocardia Arthritidis. Patient was started on Bactrim and showed clinical improvement.

Conclusion

Cutaneous Nocardiosis usually involves direct inoculation but hematogenous dissemination can also occur. It is clinically indistinguishable from soft tissue infection produced by usual pyogenic bacteria such as Staph Aureus and Streptococcus. That's why obtaining culture in high risk population, such as those with cell mediated dysfunction, is very important. Nocardia has ability to disseminate to any organ, and tendency to relapse and progress despite appropriate therapy.

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Poster Presentation No. 5

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Bilateral Adrenal Hemorrhage as a Rare Complication of Anticoagulation

Acute adrenal crisis due to bilateral adrenal hemorrhage is an uncommon condition and can be caused by post-operative stress, trauma, severe infection, myocardial infarction, chronic illness. We present a case of massive spontaneous bilateral adrenal hemorrhage as a life threatening complication of anticoagulation therapy. A 63-year-old female, with a past medical history of pulmonary embolism/deep vein thrombosis on lifelong Coumadin, presented with dizziness and intractable vomiting. Her Coumadin had been switched to Lovenox for anticipated surgery. Patient then developed progressive severe abdominal pain with negative initial imaging study. Eight days later, patient deteriorated with new onset tachycardia, hypoxemia, mental status changes and persistent hypotension. A significant 4g hemoglobin drop warranted a repeat CT abdomen, which showed a large bilateral adrenal hemorrhage. Acute adrenal insufficiency was confirmed by a low serum cortisol at 3.4 ug/dl as well as hyponatremia. Anticoagulation was discontinued and patient was immediately started on hydrocortisone and fludrocortisone. Supportive treatments with fluid resuscitation, norepinephrine were also initiated. Patient's hematocrit stabilized and was weaned off vasopressor within 36 hours. She is recovering slowly while tapering of corticosteroid.

Acute spontaneous bilateral adrenal hemorrhage is a rare but potentially catastrophic complication of anticoagulation. Diagnosis is challenging due to nonspecific complaints at presentation and is easily missed. Therefore, warning signs of adrenal insufficiency including persistent abdominal pain, hypotension and electrolyte abnormalities should justify prompt workup for adrenal hemorrhage in patients on anticoagulation. Early recognition and urgent corticosteroid replacement is the key to reduce mortality in these patients.

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Poster Presentation No. 6

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Rapidly Resolving Takotsubo Cardiomyopathy Brought on by Accidental Hypothermia

Introduction:

Takotsubo cardiomyopathy(TC) is characterized by sudden transient regional systolic dysfunction of the left ventricle(LV). It is more common in women and older adults, usually manifesting in the context of physical or emotional stress.

Case Presentation:

An adolescent male found unresponsive in the snow following acute alcohol intoxication presented to the ER with hypothermia at 90.7°F, blood pressure(BP) of 75/38mmHg, and he was intubated prior to admission for airway protection. Subsequent to ICU admission, he continued to manifest hypotension with systolic BP in the 80's despite aggressive fluid therapy and correction of hypothermia with warmed saline. His EKG showed non-contiguous ST elevations, troponin levels were normal and a drug screen was negative. Finally, an epinephrine infusion was started and cardiology was consulted to effect emergent echocardiography which revealed an ejection fraction of 35-40% with distal left ventricular(LV) hypokinesia. Pressor support was deescalated over 7.5 hours with gradually improving BP and resolution of unresponsiveness. In lieu of no cardiac risk factors another echocardiogram was done which evidenced resolution of prior wall motion defects and normalization of LV function. A diagnosis of rapidly resolving TC was made and the patient was discharged home in stable condition.

Discussion:

TC manifests from a variety of stressors however hypothermia has not been well documented as an inciting event. This case highlights the varied presentation of this condition considering the patient's age, gender, and rapid resolution of LV dysfunction. Early follow up echocardiography can help evidence resolution and limit continuation of unnecessary cardiac medications.

Poster Presentation No. 7

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Bleeding Gastric Varices in Non-Cirrhotic Patient

Gastric varices are known to be a common cause of upper GI bleed. Though frequently seen in liver cirrhosis, here we are presenting a case of upper GI bleed due to gastric varices in a non-cirrhotic patient.

A 42-year-old female with pancreatic cancer on neo-adjuvant chemotherapy presented to the ED with coffee ground emesis. Her blood pressure was 136/74 mmHg, heart rate was 101 beats/min, and hepatic as well as coagulation panel were normal. She was started on IV fluids and pantoprazole infusion, and her tachycardia improved. Her hemoglobin dropped from 12.7 to 9.3 g/dL and she received 2 units of packed RBCs. The esophagogastroduodenoscopy showed blood clots in the stomach and gastric varices, which in the absence of cirrhosis raised the suspicion of possible splenic vein pathology. The CT scan of the pancreas showed that the pancreatic tail cancer extended into the splenic vein, and an endoscopic ultrasound further showed thrombosis of the splenic vein. In considering the further drop in her hemoglobin with the presence of active bleeding signs and failure of the endoscopic treatments, the gastroenterology team recommended a splenectomy. The patient then went for a splenic artery embolization procedure which she tolerated very well. She was discharged home in stable condition after receiving post splenectomy immunizations.

Gastric varices can present in non-cirrhotic patients, and causes, including splenic vein pathology, must be considered. Should endoscopic treatments fail, the only available treatment for recurrent gastric variceal bleeding due to splenic vein occlusion is splenectomy.

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Poster Presentation No. 8

Presenter: Sindhu Gundapuneni
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A Rare Case of Infliximab-Induced Lupus

Title: A rare case of Infliximab- induced lupus

Author: Sindhu Gundapuneni, Akhil Rahman

Introduction: Infliximab is a chimeric monoclonal antibody that binds to human tumor necrosis factor alpha (TNF α). Elevated TNF α levels are seen in patients with rheumatoid arthritis and inflammatory bowel disease.

Case description: A 62-year-old gentleman with a history of ulcerative colitis who was on Infliximab for six months presented with intermittent chest pain, progressive shortness of breath and generalized weakness for four weeks. Workup revealed large bilateral pleural effusions and moderate pericardial effusion. Thoracentesis was performed and pleural fluid analysis revealed an exudative pattern. Empiric antibiotics were administered. Anti-nuclear antibodies titers were elevated at 1280 along with positive double-stranded DNA antibodies. He also developed acute left parotitis. Drug-induced lupus was suspected and Infliximab was stopped. The patient had significant improvement in his symptoms after a prolonged course of steroid therapy. Downtrend of titers with ensuing negative serology was evident after stopping infliximab.

Discussion: Despite a good safety profile, TNF α antagonists may induce lupus. Infliximab-induced lupus improves after discontinuation of the drug, with decrements in autoantibody titer. The prevalence of double-stranded DNA antibodies and hypocomplementemia is greater in infliximab- induced lupus, whilst anti-histone antibodies, the serological hallmark of classical drug-induced lupus, are less common. Steroids or immunosuppressive therapy may be required in severe cases. Infliximab-induced lupus will likely increase since the use of Infliximab is steadily rising. Thorough immunological screening is recommended prior to initiating these medications to differentiate undiagnosed systemic lupus from drug-induced lupus.

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Poster Presentation No. 9

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Old is Gold

Old is Gold

Mohammed Imran Khan

Ganesh C. Kudva

Introduction:

Immune Thrombocytopenia (ITP) is an autoimmune disorder characterized by isolated thrombocytopenia with an increased risk of bleeding. There is currently no consensus on managing refractory cases. Splenectomy is less favored as the second-line treatment of choice to Rituximab and TPO-receptor agonists. We report a patient with severe refractory ITP who achieved a complete and sustained response to splenectomy after failing three second-line medical therapies.

Case report:

A 69 year old Caucasian man with a history of Follicular Lymphoma in remission, presented with hematochezia for three weeks. Examination revealed wet purpura in his mouth and a petechial rash on both lower extremities. Laboratory evaluation revealed a platelet count of 1000/uL and hemoglobin of 11.5 g/dL. His thrombocytopenia failed to respond to three weeks of high-dose Prednisone, several doses of IVIG, four doses of Rituximab 375 mg/m², five doses of Romiplostim 1mg/kg, and four doses of Eltrombopag 50 mg. On account of being confined to the hospital for weeks with a stubbornly low platelet count of 1000/uL, he underwent an uneventful laparoscopic splenectomy with a complete and sustained response. His platelets rose to 106,000/uL within 48 hours and 999,000/uL at two weeks post-splenectomy.

Discussion:

Despite the associated risks of surgically removing one's spleen and the recent trend towards alternative medical therapies in steroid refractory patients, this case demonstrates that splenectomy is still a safe and effective treatment option for severe refractory ITP.

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Poster Presentation No. 10

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Marfan Syndrome : A Severe and Rapidly Progressive Scenario in an Adult

Background:

Marfan syndrome (MFS) is an autosomal dominant disease that results from a heterozygous mutation in FBN1, the gene that encodes fibrillin-1, which is a principal component of microfibrils in the extracellular matrix. The most common presentation for MFS is Aortic root dilatation and ectopia lentis. Severe mitral valve disorders generally manifest in infants, while in adults, the majority of complications are secondary to aortic aneurysm and dissection. Valvular findings in MFS typically show thickened valve tissue and myxomatous degeneration.

Case Report:

A 38-year-old, 6'4" tall male with 'Pigeon chest' and history of spontaneous pneumothorax presented with dyspnea, 3+ bilateral lower extremity edema and fever. Physical examination showed Grade IV/VI systolic murmur over the mitral area, radiating to the axilla. Transthoracic Echocardiogram revealed severe mitral valve regurgitation and moderate pulmonary hypertension. Transesophageal Echocardiogram showed myxomatous mitral valve, vegetations, severely flail posterior mitral valve leaflet with ruptured papillary muscle. Cardiac catheterization showed no significant coronary artery disease. The patient went into cardiogenic shock that was managed with antibiotics, pressors and Intra-aortic balloon pump and underwent mitral valve replacement. On a following visit, he was found to have annuloaortic ectasia which was complicated by aortic dissection and was managed with aortic root replacement surgery.

Learning Points:

1. Evidence indicates that excessive signaling by members of the TGF- β superfamily leads to myxomatous Mitral valve prolapse (MVP).
2. MVP is frequently identified in MFS but Mitral Regurgitation secondary to Papillary muscle/Chordal Rupture is an unusual initial presentation in adults.

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Poster Presentation No. 11

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Insulin-Mediated Eruptive Xanthomas

Introduction

Eruptive xanthomas are well circumscribed lesions containing lipid deposits which are normally found over extensor surfaces. They can be easily misdiagnosed as molluscum contagiosum and are nearly always caused by hypertriglyceridemia due to a transport defect.

Case Report

A 29-year-old male presented to the ED complaining of bilateral leg cramping for several weeks accompanied by polydipsia, polyuria, and bug bites. Physical examination revealed an obese male with a diffuse, centrally umbilicated palpable rash that was non-pruritic. Laboratory evaluation revealed glucose 398, beta hydroxybutyrate 11.30. DKA and folliculitis were diagnosed and patient was started on doxycycline. On day 3 of admission, antibiotics were discontinued and molluscum contagiosum was diagnosed. Additionally, HIV test was negative, metabolic profile was drawn and revealed cholesterol 581, HDL 22, direct LDL 47, triglyceride 2,737. Patient was discharged on lipid lowering medications and presented 5 days later for outpatient follow-up. His rash was improving, repeated lipid profile revealed cholesterol of 160, triglycerides 188. Biopsy of the lesions confirmed diagnosis of eruptive xanthomas.

Discussion

Eruptive xanthomas typically present when triglycerides are greater than 1500 and are associated with hypertriglyceridemia-induced pancreatitis. Lipoprotein lipase in response to insulin is responsible for uptake and metabolism of triglycerides. This patient's triglycerides and xanthomas improved in approximately 1 week while on insulin therapy. This case illustrates the importance of proper skin lesion diagnosis in all patients. Eruptive xanthomas warrant evaluation for metabolic disturbances and surveillance for possible pancreatic involvement.

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Poster Presentation No. 12

Presenter: My-Trang Dang

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The Breast in the End: Metastatic Lobular Breast Cancer Found in the Rectum with Literature Review

Breast cancer is the most common malignancy among women. Common areas of metastasis include the bones, lungs, pleura, liver, and brain while metastasis to the gastrointestinal tract is rare. Often times, metastasis present years after the primary diagnosis. Here, we report a case of rectal metastasis of invasive lobular carcinoma (ILC) diagnosed four years after her primary diagnosis. A 60-year old female with a history of stage IIB ILC (PR-positive, ER-positive, and HER-2 negative) status-post left mastectomy and adjuvant chemotherapy in 2013, presented with a complaint of constipation and rectal bleeding in October 2017. Colonoscopy revealed a large friable, ulcerated rectal mass extending from the anal sphincter to 10 cm in. Pathology demonstrated metastatic ILC and not a primary colon cancer. She is currently undergoing treatment with Faslodex, Ibrance, and Navelbine.

Although ILC only accounts for 5-10% of breast cancer, it disproportionately has greater GI metastasis compared to invasive ductal carcinoma. It is hypothesized that ILC's invasiveness is due to the lack of E-cadherin expression. Due to the rarity of rectal metastasis, treatment remains tailored to each patient. In a patient with a history of breast cancer (regardless of the time that has elapsed since primary diagnosis), clinicians should have a high index of suspicion for systemic recurrence in patients presenting with new GI complaints. Disease-free years does not rule-out GI metastatic disease from breast cancer. From the 31 reported cases, metastasis to the rectum can present on initial diagnosis or may take as long as 28 years.

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Poster Presentation No. 13

Presenter: Rabia Bangash

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Pseudogout in a Knee Joint Post- Total Knee Replacement: A Diagnostic Dilemma!

Acute crystal arthropathy in a prosthetic joint is a rare occurrence, with very few confirmed cases of pseudogout. Nevertheless, it should be considered in the differential diagnosis of a patient presenting with a swollen, painful, and erythematous joint after total knee arthroplasty (TKA) to prevent unnecessary surgical debridement and prolonged courses of antibiotics.

An 81-year-old man with a history of bilateral TKA for osteoarthritis developed bilateral knee swelling, worsening pain and erythema accompanied with high-grade fevers and chills. Blood work showed an ESR of 107mm, CRP of 14mg/l, and a neutrophil predominant WBC of 9500 cells/mcL. X-rays showed no evidence of implant loosening. Right knee aspirate showed: WBC 13,510 cells/mcL with 65% neutrophils and calcium pyrophosphate dihydrate (CPPD) crystals. Left knee aspirate showed: WBC 18,050 cells/mcL with 68% neutrophils and no crystals. Synovial fluid and blood cultures returned negative. The patient received bilateral knee arthrotomy with irrigation, debridement and liner exchange, and a plan for four weeks of IV antibiotics. Ultimately, it was determined that his diagnosis was most consistent with pseudogout, his antibiotics were later discontinued, and he was referred to Rheumatology for further management.

This case demonstrates the diagnostic dilemma that exists in differentiating between crystal arthritis and septic arthritis in patients with a history of joint replacement and inflammatory joint symptoms. The diagnosis is supported by the presence of positively bi-refringent rhomboid shaped CPPD crystals in the synovial fluid. NSAIDS are the drugs of choice for its treatment with an excellent prognosis.

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Poster Presentation No. 14

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A Case of Mycoplasma Pneumoniae- Induced Rash and Mucositis

Mycoplasma pneumoniae causes respiratory infections. Approximately 25% of patients develop extrapulmonary complications including dermatologic manifestations. Mucocutaneous eruptions secondary to *M. pneumoniae* vary widely in severity and morphology, making it challenging for physicians to diagnose. In severe cases with significant skin involvement there have been reports of erythema multiforme, Stevens-Johnson syndrome (SJS), and toxic epidermal necrolysis (TEN). Mycoplasma induced rash and mucositis (MIRM) is a new term recognized as a distinct diagnosis from SJS. MIRM describes mild cases in which patients develop prominent mucositis with sparse or minimal skin involvement. Here we report the case of a previously healthy 19 year-old male who presented with 1 week of productive cough and fever in addition to bilateral eye redness and painful oral lesions present for 3 days. He took no medications regularly. There was ulceration of the lips and oral mucosa, and prominent conjunctival injection bilaterally. Prominent wheezing in the left lower lobe was noted. The patient had no rash at time of initial presentation, but later developed a few scattered, faint, slightly targetoid erythematous macules of the bilateral palms and soles in addition to crusted erosions at the urethral meatus. A left lower lobe airspace disease was noted on chest x-ray. Serology indicated a rising *Mycoplasma pneumoniae* specific IgM titer. All other viral and immunology workup was negative. Our case highlights an atypical mucocutaneous manifestation of *Mycoplasma* infection classified as MIRM, which is a distinct syndrome from erythema multiforme and SJS and is of therapeutic and diagnostic importance for clinicians.

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Poster Presentation No. 15

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Tonsillar Inflammation; A Rare Cause of Bradycardia and Hypotension

ABSTRACT: Reflex bradycardia is a homeostatic response mediated by baroreceptor activation in the carotid sinus and aortic arch, whereby vagal stimulation causes inhibition of sympathetic stimulation and subsequent decrease in heart rate and blood pressure. It can be triggered by various mechanisms via direct pressure on the carotid sinus. Examples include carotid sinus massage, local tumors and swelling. Interestingly, the carotid sinus can also have a variable location in the carotid artery.

CASE: We present a 23 year old female patient admitted with a sore throat. CT showed tonsillitis with a small phlegmon/ abscess. Shortly, she developed significant sinus bradycardia with heart rate in the thirties, with relative hypotension and shortness of breath. An extensive workup revealed no pathological cause. As inflammation resolved with antibiotic therapy, her bradycardia improved. Bradycardia was subsequently attributed to direct pressure from the abscess/phlegmon and surrounding inflammation causing carotid sinus baroreceptor activation.

CONCLUSION: Simple tonsillitis can have deleterious complications if treatment is not prompt or effective. This includes rare, but potentially dangerous, bradycardia, hypotension and/or syncope from carotid sinus stimulation. If large enough, a peritonsillar abscess causing these symptoms would need drainage with potential need for a temporary pacemaker. However, in our patient, it was not deemed large enough, and symptoms improved with medical management. It was believed that the local inflammation around the carotid tissue, associated with possible abnormal location of the carotid sinus cells in the carotid artery were the cause of her symptoms through reflex Vagus nerve stimulation.

Poster Presentation No. 16

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False Positive IgM

Serum IgM testing is commonly used to diagnose acute viral infections. However, most clinicians are unaware of the vagaries of IgM testing-including antigenic cross-reactivity between multiple viruses and risk misdiagnosis. Here we report a case of infectious mononucleosis with concomitantly positive IgM for EBV,CMV,VZV and HSV.

A previously healthy 26 year-old man presented with several days of fever, fatigue, nausea and vomiting. He reported no illicit drug or alcohol use, no STD exposure and no use of over-the-counter medications. He was afebrile and vitally stable, had scleral icterus, palatal petechiae and posterior cervical lymphadenopathy. Labs revealed a lymphocyte predominant WBC of 16000, TB 7.7, ALT 1077, AST 806 , ALP 325, INR 1.0. UDS, acetaminophen and alcohol levels were negative. Monospot was positive; peripheral smear showed atypical lymphocytes. But because EBV infectious mononucleosis (IM) does not typically result in symptomatic hepatitis or an ALT over 1000 other etiologies were explored. tests for Hepatitis A,B,C,HIV,ANA and ASMA returned negative. IgM for EBV,CMV,HSV and VZV all returned positive and the diagnosis of EBV IM was called into question. Subsequent CMV and HSV PCR was negative (VZV was not suspected) and later EBV-EBNA returned negative and EBV-VCA IgM and IgG returned positive-confirming the diagnosis of acute EBV IM.

IgM seropositivity can result from cross-reactivity among several viruses(especially herpes viruses). Though often relied on, a positive IgM should not serve as the sole determinant for the diagnosis of a specific acute viral infection.

Poster Presentation No. 17

Presenter: Sanjog Bastola

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Program Director: Sandor Shoichet, MD, FACP

Henoch-Schönlein Purpura in an Adult: A Rare Cause of End Stage Renal Disease

Henoch-Schönlein Purpura (HSP), a small vessel leukocytoclastic vasculitis with deposition of IgA-containing immune complex, is primarily a disease of childhood. Clinically characterized by purpura, abdominal pain, arthritis, and renal insufficiency, it is relatively rare in adults.

A 79 year-old-male with history of hypertension and diabetes presented to the EC with headache and blurring of vision for two days. On physical examination, his blood pressure was elevated in systolic 200s. He had purpuric rashes on bilateral forearms and feet. Creatinine was elevated to 4.9 mg/dl. Urinalysis revealed nephrotic range proteinuria and dysmorphic hematuria. C3 and C4 levels were normal. ESR and CRP were elevated. ANA, ANCA, anti-GBM antibodies, HIV and hepatitis serologies were negative. Skin biopsy showed leukocytoclastic vasculitis. Renal biopsy showed IgA deposits in mesangium. Diagnosis of HSP was made based on clinical findings and histology and he was started on high dose steroid. His renal function didn't improve despite high dose steroid and he was started on hemodialysis.

HSP in adults presents with severe and progressive decline in renal function compared to children. Adults may present with severely elevated blood pressure and other associated complications with it like stroke. Adults usually have an atypical presentation with absence of arthritis, abdominal pain and lack of preceding upper respiratory tract infection hence high degree of suspicion is required to make a diagnosis. Although HSP is rare in adults, it is crucial to detect and treat early because of poor renal prognosis, and evaluation of renal histopathology is imperative in these cases.

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Poster Presentation No. 18

Presenter: Sohail Farshad

Additional Authors:

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Metastatic Melanoma to the Stomach 15 Years Later

Introduction:

Metastatic melanoma to the stomach is a rare entity and portends a very poor prognosis with a median survival of 4 to 6 months (1). We present the case of a patient who presented with MRSA sepsis but was found to have metastatic melanoma to the gastric cardia.

Case report:

An 89-year-old male with a history of localized melanoma of the chest status post excision 15 years ago presented with fever and leukocytosis secondary to MRSA grown from blood cultures. Later, his hemoglobin acutely decreased and fecal occult blood was positive. Upper endoscopy showed a large, 5-milimeter non-circumferential bleeding mass in the gastric cardia with raised borders and a central, protruding, ulcerated center. Biopsy was positive for S-100 and HMB-45 consistent with metastatic melanoma. He was started on nivolumab. Unfortunately, he decompensated 2 months after diagnosis and was enrolled in hospice care.

Discussion:

The most common gastrointestinal (GI) metastatic sites from cutaneous melanoma are the jejunum and ileum, followed by the colon, rectum, and then the stomach (2). If there is suspicion for metastasis to the GI tract, upper endoscopy should be performed for direct visualization and biopsy should be obtained if a lesion is discovered. The clinical manifestations are usually nonspecific, and many patients are asymptomatic until the disease progresses further, which can delay the diagnosis or miss it entirely until autopsy (3). Treatment options include surgical resection, immunotherapy, and targeted therapy.

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Poster Presentation No. 19

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18 Centimeter Pulmonary Metastatic Uterine Leiomyosarcoma. Is That Even Possible?

Introduction

Uterine Leiomyosarcoma (ULS) is a rare malignancy that arises from the smooth muscle of uterine wall. They are estimated to occur in 6 out of every 1,000,000 women in the US. We report a case of ULS in a 69-year-old female with metastasis to lung.

Case Description

69-year-old female, presented with chronic pelvic pain and dysfunctional uterine bleeding. Further workup led to diagnosis of ULS, measuring 13 cm. She was treated with total abdominal hysterectomy but declined adjuvant chemotherapy. Five years later, she presented with shortness of breath and weight loss. Computerized Tomography showed a large 18 cm mass replacing the entire left lung. She underwent resection and pathological analysis demonstrated high grade metastatic sarcoma. She received chemotherapy achieving great clinical response. Four years later, therapy was discontinued due to development of high-grade MDS. As of today, continues to do well with treatment.

Discussion

ULS is a very aggressive tumor that most commonly metastasizes to the lung, followed by peritoneum, bone and liver. Several risk factors have been described including: Increasing age, African American race, Tamoxifen use and pelvic radiation. The novelty in this case is dual. First, 5-year survival for metastatic ULS is reported from 8-17%. Our patient has survived for 12 years; whereas the longest reported survival in the literature is only 9 years. Secondly, a metastatic tumor larger than the primary has never been reported. In our review, multiple lung lesions are more common than a single lesion making this 18 cm tumor

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Poster Presentation No. 20

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Chlamydia Psittaci Pneumonia with No Known Avian Contact: A Rare Presentation

Psittacosis is zoonotic disease caused by intracellular bacterium chlamydia Psittaci transmitted through inhalation of respiratory secretion or dropping of infected birds. It manifests as systemic illness with pulmonary symptoms. A history of contact with infected birds is reported in most cases.

54 year old lady with history of diabetes mellitus and hypothyroidism presented with shortness of breath, chest pain and hemoptysis for one day. She was hypoxic with oxygen saturation 84% on room air and had crackles on lung examination. Laboratory studies showed normal leukocytes count, mild hyponatremia and transaminitis. Chest X-ray showed patchy air-space opacity in bilateral lung field and a subsequent CT-chest demonstrated diffuse ground glass opacities in bilateral lung field. Levofloxacin was started for community acquired pneumonia. Bronchoscopy revealed minimal old blood scattered throughout tracheobronchial tree without identifiable site of bleeding. Streptococcus pneumonia, legionella urine antigen, mycoplasma IgM, AFB, RSV tests were negative. However, Chlamydia psittaci IgM antibody came back positive with titre of >1/160. With diagnosis of Chlamydia psittaci pneumonia she was treated with levofloxacin for 5 days. Bilateral patchy infiltrates on repeat Chest X-ray resolved and hemoptysis did not recur.

Psittacosis manifests with pulmonary symptoms and at times have extrapulmonary complications such as arthritis, hepatitis, and encephalitis. It is usually suspected with history of contact with birds. Our case presented with hemoptysis without avian contact which is a rare presentation. This case demonstrates that chlamydia psittaci pneumonia should be considered in differential diagnosis of hemoptysis even without history of avian contact.

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Poster Presentation No. 21

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The Lung - Gut Axis: A Rare Case of Inflammatory Granulomatous Bronchiolitis in Crohn's Disease

INTRODUCTION: Necrotizing pulmonary granulomas are seldom the initial manifestation of Inflammatory Bowel Disease. We describe a case of suspected pulmonary embolism where unexpected findings on the CT Chest facilitated in appropriately diagnosing Crohn's disease.

CASE PRESENTATION: An 18-year-old female with a history of irritable bowel syndrome, oral contraceptive use and a recent 13-hour road trip, presented with left-sided pleuritic chest pain. Physical examination was unremarkable. Investigations revealed WBC count of 12.8 bil/L with monocytosis, normocytic anemia with hemoglobin 11.5 gm/dl, and low albumin 3.8 g/dL. A CT chest with contrast did not show pulmonary emboli, but a right lung nodule >1cm and a 6.5 x 3.8 cm lobulated left lower lung pleural-based mass. A CT-guided core biopsy affirmed a non-caseating granuloma with surrounding fibrosis. Gram, acid-fast and fungal stains were negative, with tissue culture showing no growth. Serology was negative, including anti-nuclear antibody and anti-cytoplasmic antibody. On Pulmonology clinic follow-up, she reported intermittent hematochezia for which a colonoscopy 6 months ago had shown acute cryptitis without granulomas. A repeat colonoscopy with biopsy confirmed Crohn's disease. A follow-up CT Chest at 2 months showed interval decrease in the lung opacities, largest 2.0 cm.

CONCLUSIONS: Crohn's disease is associated with various lung manifestations including bronchiolitis obliterans, granulomatous interstitial lung disease, pulmonary infiltrates with peripheral eosinophilia, atypical infection or drug reaction. Most reported cases have a diagnosis of Crohn's prior to lung involvement. Our case highlights the importance of streamlining investigations to rapidly diagnose and treat Crohn's patients, independently of their gastrointestinal manifestations.

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Poster Presentation No. 22

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The Red Herring - Benign Biopsy Delays Diagnosis of a Rare Malignancy

Alveolar Soft Part Sarcoma (ASPS) is a rare malignancy that comprises 0.5 - 1% of sarcomas. Although it has an indolent course, it has a predilection for early metastases to the lungs and brain.

A 56-year-old female presented with bilateral hip pain with radiation down her thighs. Spine MRI showed microfracture of the 4th lumbar vertebrae (L4) and the patient was referred to a pain specialist. She returned with urinary incontinence, repeat spine MRI revealed an L4 mass expanding into the spinal canal. CT scan demonstrated multiple pulmonary nodules and a liver lesion. Bone scan demonstrated expansive lesions of the L4 vertebral body and sacral ala bilaterally. Biopsy of the L4 mass was interpreted as Xanthofibroma. The patient refused surgery and continued to follow with the pain specialist. Her pain worsened, and a third MRI showed L4 mass with compromise of the thecal sac. MRI pelvis demonstrated marrow replacement and hyperintense lesions. MRI of the right lower extremity revealed a well circumscribed intramuscular mass. Biopsies of the left iliac bone and the intramuscular mass established the diagnosis of ASPS. The patient was treated with palliative L4 Laminectomy and L3-L5 fusion with radiation to the post-operative bed.

This case presents a rare cause of back and hip pain whose diagnosis was delayed by negative imaging and biopsy. Despite the benign pathology of the first biopsy, further investigation was pursued given the suspicious lesions in the lungs. Definitive treatment with surgical excision was no longer a possibility at the time of diagnosis.

Poster Presentation No. 23

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A Blind Spot in the Diagnostic Field

Tumefactive Multiple Sclerosis (TMS) is a rare variant with 1 per 1000 cases of MS and 3 per million cases per year. TMS can mimic clinical and radiological features of a neoplasm, infarction or abscess, and therefore can be diagnostically challenging.

A 29-year-old female with no medical history presented the hospital for acute left-sided vision loss. Associated symptoms included photophobia, floaters, and bi-frontal headache. On examination, she had left homonymous hemianopia, but no other neurologic deficits. Computed tomography revealed acute ischemia involving the right parieto-occipital lobe with vasogenic edema. Magnetic Resonance Imaging revealed a mass in the aforementioned region. Initial differential was ischemia versus neoplasm. She was started on dexamethasone and underwent brain biopsy. Pathology revealed active demyelination consistent with TMS. Cerebral spinal fluid analysis supported the diagnosis with elevated immunoglobulin G/albumin ratio. She received pulse dose intravenous hydrocortisone and transitioned to prednisone taper. She was discharged with stable neurologic status to inpatient rehabilitation and plans to start immunomodulatory therapy as an outpatient.

This is a unique case of TMS manifesting as homonymous hemianopia. Studies have shown only 10% of patients with TMS present with visual deficits. Diagnosis of TMS is difficult but should be strongly considered in patients with neurologic deficits and supportive imaging findings. These include mass greater than 2 centimeters, vasogenic edema, ring enhancement, restricted diffusion, and T2 hypointensity. Typically, patients follow a relapsing-remitting course although, studies have shown a mass greater than 5 centimeters, as seen in our patient, is a poor prognostic factor.

Poster Presentation No. 24

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A Rare Cause of Non-Ischemic Cardiomyopathy: Isolated Cardiac Sarcoidosis

A 52 year-old male with a seventeen year history of hypertension presented to the emergency department with 2 weeks of progressive chest pain, dyspnea, and edema. Blood pressure was 169/131 mmHg with bibasilar pulmonary rales and peripheral edema noted on examination. Electrocardiogram was without ischemia or conduction abnormalities. Chest x-ray showed mild congestive heart failure. Echocardiogram revealed left ventricular ejection fraction of 30% with diastolic dysfunction. Cardiac catheterization demonstrated normal coronary arteries. Lisinopril, carvedilol, furosemide, and spironolactone were used with difficult blood pressure control. He had a negative work up for primary hyperaldosteronism, pheochromocytoma, and renal artery stenosis by doppler. Cardiac MRI revealed patchy delayed gadolinium enhancement, suggestive of an infiltrative process. Cardiac PET was suspicious for sarcoid infiltration involving the distal anterior wall and extending into the apex. He had normal calcium, CRP, ESR, angiotensin converting enzyme, and dihydroxyvitamin D levels. CT scan of the chest was unremarkable for pulmonary disease. Ophthalmological and dermatological examinations were negative for extra-cardiac involvement. Endomyocardial biopsy was negative for non-caseating granulomas or amyloidosis and demonstrated only fibrosis. It was opted to initiate prednisone therapy with follow up outpatient cardiac PET imaging.

Clinically apparent cardiac sarcoidosis is present in 5% of patients with known sarcoidosis. However, the prevalence of isolated cardiac disease is unknown. The rarity of isolated cardiac sarcoidosis raises the dilemma of treatment based solely on imaging without a definitive tissue diagnosis as, unfortunately, endomyocardial biopsy has low yield with a sensitivity of only 20%.

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Poster Presentation No. 25

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How Manic is MANEC? A case of MANEC in the Cecum

Mixed adenoneuroendocrine carcinoma (MANEC) is a rare, poorly understood gastrointestinal tumor. Diagnosis is based on the tumor architecture and must include immunohistochemistry. Tumors must stain positive for two of the following: chromogranin, synaptophysin, and/or CD56. The most common location is typically the appendix, and small bowel involvement is exceedingly rare.

A 57-year-old male with no significant PMH presented with vague abdominal discomfort. CT abdomen/pelvis with contrast demonstrated a 11 x 6 x 6 cm cecal mass. Gastroenterology performed a colonoscopy, which revealed scattered ulcerations throughout the colon and terminal ileum as well as a deformed ileocecal valve with umbilication. Colorectal surgery was consulted and performed a right hemi-colectomy with removal of the cecal mass. Pathology revealed mixed adenoneuroendocrine carcinoma with lymphovascular involvement. Omentum removed intra-operatively was positive for malignancy. Patient's post-operative course was complicated by fascial dehiscence, enterocutaneous fistula and sepsis. He was unable to start chemotherapy due to these morbidities. Three months later a PET scan was performed which confirmed progression of the metastatic tumor. The plan was to initiate chemotherapy with etoposide and carboplatin but the patient's clinical status continued to worsen and he ultimately passed away.

MANEC is an aggressive malignancy with a high metastatic potential, as seen in our patient. In most cases, a combination of etoposide and carboplatin is recommended; however, due to the rarity of the tumor, treatment regimen is not well defined and requires further investigation.

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Poster Presentation No. 26

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Bevacizumab-Induced PRES

Posterior reversible encephalopathy syndrome (PRES) manifests as edema in the white matter of the posterior regions of the cerebral hemispheres. PRES has been associated with acute hypertensive encephalopathy, renal disease, pre-eclampsia or eclampsia, and following the administration of immunosuppressive agents and chemotherapy.

A 43-year-old man with a history of hypertension, grade III brainstem anaplastic astrocytoma and diabetes presented to the hospital due to acute changes in mental status and fever. Seven months prior to presentation, bevacizumab (Avastin) was added to his chemotherapy regimen. Upon arrival, he was lethargic and did not follow commands on physical examination. Pertinent vital signs included: blood pressure of 203/124 mmHg, heart rate of 139 bpm and temperature of 103°F. Initial laboratory values included normal complete blood count and complete metabolic panel. CT head without intravenous contrast indicated evidence of old tumor but no hemorrhage or mass effect. CSF showed mild elevation of protein but no cells. Magnetic resonance imaging of the brain exhibited signal abnormalities in the occipital lobes compatible with PRES. There was no evidence of infection by any microbiological data.

With blood pressure control and rehabilitation, the patient had a full recovery.

PRES has been reported with an incidence of <0.5% with bevacizumab and the onset can be from 16 hours to 1 year of initiation of therapy.[1] A literature review from 2015 reported 21 cases of bevacizumab-induced PRES, 20 of which had complete recovery following withdrawal of medication along with strict BP control.[2]

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Poster Presentation No. 27

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Double the Trouble - Sickle Cell Trait with Renal Cell Carcinoma

Introduction:

Renal Medullary Carcinoma (RMC) is a rare form of non-clear cell renal carcinoma that is typically associated with sickle cell trait. This is an aggressive subtype that is often metastatic at diagnosis and usually presents in African Americans with 2:1 male to female ratio.

Case Description:

21-year-old African-American female with history of sickle cell trait who presented with abdominal discomfort and hematuria; CT of abdomen and pelvis showed 5.8 x 4.4 x 5 cm in left kidney with erosion into the psoas muscle. Patient underwent left partial nephrectomy (Furhman Grade 4/4) with extensive lymph node dissection which qualified her disease as Stage 3 renal medullary carcinoma. She did not receive any adjuvant therapy. Patient was lost to follow up with no imaging or chemo-radiation due to her pregnancy. When she presented again she was found to have sub-carinal lymph nodes that were biopsied and were consistent with RMC. She went to University of Michigan where she was evaluated for any clinical trials however there were none available. Final recommendations included palliative external beam radiotherapy to larger lymph nodes and palliative systemic chemotherapy with cisplatin and gemcitabine.

Discussion:

RMC is an extremely aggressive cancer with mean survival of around 1 year. No chemotherapy regimen has been found to be efficacious. RMC is so rare that clinical trials are very limited at this time however, there is room for research into genetics, mutations and possible chemotherapy targets. Furthermore, this is often referred to as the seventh sickle cell nephropathy.

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Poster Presentation No. 28

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One Nocardia Short of a Full Deck

In primary cellulitis, the natural bacterial skin flora of *Staph aureus* and *S. pyogenes* are the usual causative agents. However, in immunocompromised patients, conditions surrounding the occurrence of cellulitis may dictate the pathogen. A wide variety of atypical pathogens can invade the skin of immunocompromised patients. Nocardiosis is an uncommon opportunistic infection caused by several species of soil and water-borne aerobic bacteria belonging to the genus *Nocardia*.

A 50-year-old male with a history of kidney and pancreas transplants on immunosuppressants presented with redness and tenderness to his finger. He denied trauma or injury to the area or recent sick contacts. An incision and drainage was performed and cultures were sent. He was started on IV Vancomycin. Cellulitis improved with one dose of Vancomycin and he was discharged on oral Linezolid. Patient returned one week later with no improvement. The wound gram stain revealed a "rare gram positive bacilli with branching." Culture grew *Nocardia* species. CT head and chest were ordered and no disseminated infection was found. Linezolid was stopped and patient was started on Minocycline for cutaneous Nocardiosis.

This case demonstrates an interesting finding of an opportunistic infection in an immunocompromised patient. Although we expect these types of infections to occur, patient denied any trauma and it was assumed that the patient had *S. aureus* given that the patient seemingly improved with vancomycin. It is important for clinicians to follow patient's cultures and treat patients according to the final results as both organisms can lead to different disseminated infections.

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Poster Presentation No. 29

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Jejunal Adenocarcinoma Masquerading as Iron Deficiency Anemia

Small intestine malignancies pose a great challenge to medical management. Although the small intestine constitutes more than 70% of the total length of the gastrointestinal tract, they only make less than 2% of GI Malignancies. Clinical manifestation of small intestinal tumors could range from bowel obstruction, abdominal pain to gastrointestinal hemorrhage.

67 year old Caucasian male patient presented with abdominal pain and fatigue of 1 month duration; was found to be anemic with hemoglobin of 6.5mg/dl for which he received 2 Packed red blood cell transfusions. Labs revealed Iron deficiency anemia with elevated reticulocyte count. However, fecal occult blood was negative. Due to high index of suspicion of GI Blood loss, both EGD and colonoscopy was done. EGD revealed chemical gastropathy. Colonoscopy showed multiple hyper-plastic and adenomatous polyps. No etiology was implicated as the cause of significant symptomatic iron deficiency anemia. A CT scan of the abdomen/pelvis/enterography showed 2 lesions in the liver, jejunal wall thickening with lymphadenopathy. Biopsy of the jejunal lesions revealed poorly differentiated adenocarcinoma with possible metastasis to liver confirmed on MRI. He was offered capeOx, Folfox without bevacizumab due to his bleeding and he is currently doing well without any evidence of progression.

Adenocarcinomas, particularly those of the jejunum are not symptomatic when compared to other bowel malignancies, thus making it difficult for earlier detection and therapeutic intervention. Overall, greater effort is necessary to detect these tumors as early as possible especially in case of subtle presentations like anemia of unknown origin.

Poster Presentation No. 30

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Sjogren's Interstitial Nephritis Affecting Outcomes in Pregnancy

The reported prevalence of renal involvement in patients with Sjogren's syndrome varies from 2 to 67 percent. It is characterized by chronic interstitial nephritis marked clinically by a mild elevation in the serum creatinine, a relatively benign urinalysis, and abnormalities in tubular function.

This is a 44 y/o G2P1A0 female with no major past medical history presented with dry mouth, dry eyes and vaginal dryness. She had experienced flank pain and dysphagia during her first pregnancy. She delivered a healthy infant at 39 weeks. The baby had cleft lip, but no other abnormalities. Five months postpartum, she was found to have a serum creatinine of 1.6 with hypokalemia. UA revealed leukocytes and trace protein. ANA, Anti-Ro (SSA) and Anti-La (SSB) antibodies were positive. Other workup including HIV, Hepatitis panel, Anti ds DNA, RNP, Smith, Jo-1, SCL antibodies, SPEP, UPEP was negative. Renal Ultrasound and CT scan of the abdomen showed medullary calcifications consistent with medullary sponge kidney. Labial lip biopsy was positive for Sjogren's syndrome. Renal biopsy revealed severe interstitial nephritis with plasma cells consistent with Sjogren's kidney disease. Initially she was started on Cellcept and Prednisone. Subsequently she was started on Plaquenil and steroids were tapered down. She was switched from Cellcept to Imuran considering her wish for second pregnancy.

SSA and SSB antibodies increase the risk of neonatal lupus and Congenital Heart Block. Risks related to Sjogren's interstitial nephritis are preterm birth, miscarriage, stillbirth, pre-eclampsia, eclampsia, thrombophilia during pregnancy, leading to maternal and infant morbidity and mortality.

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Poster Presentation No. 31

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Watery Diarrhea and Pseudomembranous Colitis—Is Culprit Always Clostridium Difficile?

Introduction:

Collagenous colitis (CC), a subtype of microscopic colitis, is an inflammatory gastrointestinal condition, where chronic, intermittent, watery diarrhea is the leading symptom. Alternatively, pseudomembranous colitis (PC) is almost exclusively associated with infectious etiology—Clostridium difficile infection (CDI). Herein, we present an interesting case of pseudomembranous CC in absence of CDI.

Case description:

41-years-old female presented to hospital with persistent diarrhea and diffuse abdominal-pain for two-weeks. Diarrhea was described as watery, non-bloody, occurring every 30mins-1hour. Patient was treated for CDI 4-months ago with multiple-rounds of antibiotics due to reoccurring watery diarrhea. Upon admission, lab-workup revealed mild leukocytosis. CT abdomen noted fluid levels in colon, consistent with gastroenteritis. Initial diagnosis was presumed to be CDI due to recent-history, hence, oral vancomycin was started empirically. However, stool-studies were negative for CDI among other infectious etiologies. Colonoscopy was done which revealed yellowish-plaques (pseudo-membranes) throughout the colon with mild-inflammation of underlying-mucosa. However, biopsies revealed benign-colonic-mucosa with surface-ulceration, marked collagen deposition of lamina-propria—consistent with severe CC. Patient was started on budesonide therapy, which significantly improved her symptoms.

Discussion:

Our patient was diagnosed with rare-variant of CC called “pseudomembranous collagenous colitis”- a relatively new entity with only a handful of reported cases. Endoscopically, CC has normal appearing colonic-mucosa, with minimal changes reported in upto 20% cases. Nevertheless, formation of pseudo-membranes in otherwise typical CC is extremely uncommon. Hence, clinicians need to be aware that prior-history of CDI and presence of pseudo-membranes does not preclude diagnosis of CC, as it completely changes the face of management.

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Poster Presentation No. 32

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A Silent Hole in Heart for a Long Time: A Case of 82-year-old Patient with Thrombus Straddling Across Patent Foramen Ovale

Patent foramen ovale (PFO) is an etiology of 40%-50% of cryptogenic stroke. Thrombus-straddling the PFO (TSPFO) is a rare finding commonly found during autopsy. We present a case of TSPFO diagnosed by echocardiography and treated successfully with open thoracotomy in an elderly patient who presented with ischemic stroke.

An 82-year-old male with history of ischemic cardiomyopathy and recent unprovoked deep venous thrombosis (DVT) presented with an acute left-sided, occipital cerebral infarct. Transthoracic (TTE) and transesophageal (TEE) echocardiogram showed a large, mobile, serpiginous, intracardiac thrombus originating in right atrium, crossing the tricuspid valve into the right ventricle. It was also crossing the patent foramen ovale, into the left atrium and left ventricle. Cardiac catheterization showed 50% in-stent restenosis of left anterior descending artery and 99% in-stent restenosis of the right coronary artery (RCA). Ejection fraction was 50% with moderate aortic regurgitation. The patient underwent thrombectomy through an open thoracotomy, as well as PFO closure, CABG with saphenous vein graft to RCA, and aortic valve (AV) replacement with bioprosthetic valve. Follow up TTE showed low-normal left ventricular systolic function and well-seated bioprosthetic aortic valve.

The risk of paradoxical embolism in patients with TFSO to be 44%. There was only a slight difference in the mortality rate of open thoracic thrombectomy and anticoagulation alone. We selected open surgical thrombectomy since the patient required AV replacement also. Clinical suspicion of paradoxical embolism should be raised in patients with pulmonary emboli or DVT if there is a concomitant focal neurological symptom. The treatment must be individualized.

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Poster Presentation No. 33

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Posterior Reversible Encephalopathy Syndrome (PRES) with Cerebellar Involvement in the Absence of Hypertension

Introduction: Posterior reversible encephalopathy syndrome (PRES) refers to a disorder of reversible subcortical vasogenic brain edema in patients with acute neurological symptoms in the context of blood pressure fluctuations and other conditions. Brain imaging usually reveals vasogenic edema predominantly involving the bilateral parieto-occipital regions. PRES is generally reversible, both radiographically and clinically and has a favorable prognosis.

Case description: A 67-year-old healthy female with no significant past medical history admitted for perforated diverticulitis. On the 3rd night, she developed sudden onset of complete visual loss. On evaluation, she was mildly somnolent with a headache but had no gross sensorimotor deficits on examination. Funduscopic examination was normal. Head CT had non-hemorrhagic infarction in both occipital lobes. The patient had seizure activity during the MRI. T2 and FLAIR sequence showed significant patchy areas of hyperintense signal in the bilateral parieto-occipital and subcortical regions. Similar changes in the right and left cerebellar hemisphere and thalamus bilaterally. The appearance was consistent with PRES syndrome. During her hospitalization, her blood pressure ranged between 140/92 to 120/60. EEG showed diffuse hemispheric slowing. CSF showed elevated WBC count 92 and protein 106. Encephalitis was suspected and antibiotics were initiated. Other workup was negative. She recovered within 10 days with no residual deficits.

Discussion: According to studies, blood pressure is significantly higher in brainstem or cerebellar PRES than in parieto-occipital PRES. However, this case was an uncommon presentation because the patient was not hypertensive prior to neurological symptoms.

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Poster Presentation No. 34

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West Nile Virus Infection in Michigan Masquerading as Guillain-Barre-Like Syndrome

West Nile virus infection usually causes mild symptoms but in neuroinvasive infections can manifest with acute flaccid paralysis and mimic Guillain-Barre syndrome.

This is a 78 y.o. male who presented with myalgia and progressive weakness. He was seen by his PCP eleven days PTA for a routine visit and was given influenza vaccine. Three days later, he developed myalgia and fever. On the day PTA, he developed acute bilateral leg weakness and then of the arms within 24 hours. He was then unable to stand or walk on his own. He was promptly evaluated by neurology and was noted to have generalized weakness more pronounced in both lower extremities (power 3/5 and 4/5 on upper extremities). He had hyperreflexia and hypoesthesia on the distal upper and lower extremities. His CBC, CMP and brain/spine MRI were unremarkable. An acute inflammatory demyelinating polyneuropathy was initially considered.

CSF analysis revealed elevated protein of 122 mg/dL, normal glucose and WBC of 14. Patient was started on IVIG. CSF encephalitis panel came back positive for significantly elevated levels of IgM and IgG for WNV. Serum testing also came back positive for WNV IgM and IgG. Patient showed very minimal improvement on his strength after 5 days of IVIG therapy. He was eventually discharged to a rehabilitation facility.

This highlights the importance of ruling out an uncommon infection particularly neuroinvasive WNV in a patient coming in with a GBS-like presentation. Although treatment is primarily supportive, case reports have reported benefit of IVIG in neuroinvasive WNV infection.

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Poster Presentation No. 35

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Expect the Unexpected! An Isolated Case of Ewing Sarcoma of the Pancreas

Introduction:

Ewing sarcoma (ES) is a highly malignant bone tumor of long-bones whereas, Extraskeletal Ewing sarcoma (EES) is a poorly differentiated soft tissue sarcoma that is integrated in the morphologic category of 'small-round-cell' tumors and accounts for less-than 1% of soft tissue sarcomas. Herein, we present a case of a pancreatic mass that was initially misdiagnosed as adenocarcinoma, and later identified as EES of pancreas.

Case presentation:

34-year-old-male with no-known medical-history presented to the clinic secondary to insidious onset of generalized abdominal pain for past one-month. Physical-exam revealed a palpable mass above the umbilicus. CT abdomen showed lobulated heterogeneous mass in pancreas, along with multiple liver lesions. Resultantly, a working diagnosis of adenocarcinoma of pancreas with metastasis to liver was made. A CT-guided biopsy of the pancreatic and hepatic mass was performed, and histology came back as small, blue, round cells with scant cytoplasm. Immunohistochemistry confirmed the diagnosis of ESS and the patient was started on chemotherapy with adriamycin, cyclophosphamide and vincristine. He developed neutropenic fever after one round of chemotherapy and subsequently expired after a complicated hospital course.

Discussion:

This case highlights an extremely rare type of soft tissue sarcoma—EES at an unusual location. Histologically, ES and EES are described as small, blue, round cells with hyperchromatic nuclei and scant cytoplasm, with molecular expression of MIC2, CD99. EES is an aggressive tumor with five-year-survival rate of approximately 50%. Though EES is rare, early recognition and intervention is the hallmark of this highly aggressive tumor.

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Poster Presentation No. 36

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MIRM: A Rare Complication of an Atypical Pneumonia

Mycoplasma pneumoniae Induced Rash and Mucositis (MIRM) is a rare complication of *Mycoplasma pneumoniae* infection which involves mucosal sloughing, and is differentiated from Stevens-Johnson syndrome (SJS) and erythema multiforme (EM) by minimal skin involvement.

A 21 year old woman presented to the hospital for lip swelling after recent exposure to both amoxicillin and codeine. She was diagnosed with sepsis secondary to bilateral pneumonia and displayed severe lip swelling with fissures and bleeding. She was started on IV antibiotics, antihistamines, and IV steroids. While hospitalized she was evaluated by otolaryngology for odynophagia and dysphagia of her oral secretions. Nasolaryngoscopy revealed oronasopharyngeal erythema with mucosal sloughing. Dermatology recommended collecting a respiratory viral PCR panel, *Mycoplasma pneumoniae* IgM level, and HSV PCR. The *Mycoplasma pneumoniae* IgM resulted positive, confirming the diagnosis of MIRM.

This uncommon complication of *Mycoplasma pneumoniae* infection presented a diagnostic challenge. Few reports regarding presentation and management of MIRM exist, and there are no guidelines for treatment. Diagnostic criteria were recently proposed to differentiate MIRM from SJS by Canavan et al. Our patient fit the proposed criteria for MIRM in that she had <10% body surface area affected, ≥ 2 mucosal sites involved, few peripheral lesions, and evidence of atypical pneumonia. Additionally, SJS is typically caused by a medication and involves more widespread skin involvement, while EM is typically caused by HSV and has acral distribution of distinct target lesions. We also used management trends mentioned to guide our treatment regimen, which included systemic corticosteroids, antibiotics, antihistamines, and supportive care.

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Poster Presentation No. 37

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Snowball Effect; From an Uncomplicated Delivery to a Rare Case of Septic Ovarian Vein Thrombophelbitis and Pulmonary Emboli

Septic Ovarian vein thrombophelbitis SOVT is a rare cause of abdominal pain that occurs in peripartum females. It is rarely associated with further complications. We report a case of a peripartum 23 years old female who presented 11 days post normal vaginal delivery with abdominal pain and substernal chest pain. Imaging revealed a unilateral SOVT extending to the inferior vena cava, hydronephrosis and septic pulmonary emboli. The patient was managed with anticoagulation and antibiotics and mechanical relieve of the ureteral obstruction. The patient eventually made a full recovery. The recommended management for SVOT includes anticoagulation and antibiotic therapy to cover against common endometritis pathogens including streptococci, gram negatives and anaerobes. SOVT is an important diagnosis to consider in peripartum females presenting with abdominal pain.

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Poster Presentation No. 38

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When Leg Edema Goes Beyond Venous Insufficiency: A Rare Case of May-Thurner Syndrome Variant

A 59-year-old male patient with no significant past medical history presented to our hospital with left foot swelling that started almost four weeks prior to presentation. The swelling was progressive, ascending, and associated with erythema. The patient was initially evaluated by his primary care physician who requested a venous Doppler of his lower extremity. This was negative for deep venous thrombosis (DVT), and he was subsequently started on a course of antibiotics due to concern for cellulitis. Despite antibiotic therapy, the patient's swelling progressed to involve the entire left lower extremity. The patient was started then on conservative venous insufficiency treatment including compression stockings, leg elevation, and later Lasix. Given the patient's persistent symptoms and lack of improvement despite those measure, he was referred for a venogram which showed patent venous system in the right side but revealed a narrowing in his left external iliac vein, the area of stenosis occurred at the crossing of what looked like a pulsatile artery, at the level of the crossing of the hypogastric artery into the pelvis. The patient underwent angioplasty and stenting of the narrowed vein which he tolerated well. He was later discharged on aspirin, clopidogrel, and a short course of antibiotics, and his swelling resolved completely three weeks later.

MTS is an anatomically and pathologically variable condition leading to venous outflow obstruction as a result of extrinsic venous compression in the ilio caval venous territory.

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Poster Presentation No. 39

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Avoiding Painful Needles: A Case Report on Diagnosing Eosinophilic Granulomatosis with Polyangiitis

A 73-year-old male with history of asthma and chronic left lower extremity pain presented to the Emergency Department with the primary complaint of acute left lower extremity pain and numbness, as well as subacute bilateral lower extremity swelling. Upon further questioning, he did admit to dyspnea on exertion without orthopnea, PND, fever, chills, cough, sputum production, weight loss, or malaise. Initial chest x-ray was concerning for an interstitial process and CT chest showed lower lung ground glass and tree-in-bud opacities, bronchial wall thickening, mucous plugging, and interlobular septal thickening. Laboratory work-up was significant for leukocytosis with 70% eosinophilia, total IgE >3000, erythrocyte sedimentation rate 102, C-reactive protein 1.3, Rheumatoid Factor 300, and negative p and c-Anti-neutrophil cytoplasmic antibodies. Bronchoscopy guided biopsy results were negative for vasculitis in medium sized pulmonary vessels. EMG study showed left leg and foot sensory and motor neuropathy. Skin punch biopsy for a transient petechial rash over the shins showed leukocytoclastic vasculitis rash. Sural nerve biopsy showed extravascular eosinophilia and granulomatous vasculitis, consistent with EGPA. The patient was then discharged home on high dose steroids. EGPA is a rare, but not uncommon, multiorgan disease that should be suspected in patients presenting with asthma, sinusitis and eosinophilia. Although p-ANCA testing is commonly done on initial work up, it is neither sensitive nor specific. Special attention should be paid to ANCA negative patients presenting with mononeuritis multiplex, as nerve biopsy can confirm the diagnosis. This will avoid other invasive procedures, such as surgical lung biopsy.

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Poster Presentation No. 40

Presenter: Firdhous Alimathunisa Abdul Kather

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Vitamin B12 Deficiency Masquerading as Multiple Sclerosis: A Case of Prolonged Misdiagnosis

The phenotypic heterogeneity of neurodegenerative diseases can prove to be challenging in their diagnoses. Subacute combined degeneration (SACD), a complication of vitamin B12 deficiency, is an acquired myelopathy affecting the dorsal and lateral columns of the spinal cord. Misdiagnosis of SACD is common, given its rarity and features paralleling that of the well-known Multiple Sclerosis (MS). We describe the case of a 44-year-old African American female with recurrent episodes of lower extremity weakness. Her symptoms had been erroneously attributed to MS- a diagnosis preemptively made 7 years prior on the basis of oligoclonal bands in cerebrospinal fluid. However, the patient's MRI revealed variability in the pattern of demyelination, which did not fit the finger-like demyelinating configuration through the corpus callosum ("Dawson's fingers"), pathognomonic of MS. Perhaps the unique facet, in this case, was positive intrinsic factor antibody and significant vitiligo, a feature associated with cobalamin deficiency, making the diagnosis of SACD more favorable. With treatment, the drastic improvement in the patient enabled her to ambulate after a long time, adding further validation in refuting the preceding misdiagnosis of MS. Both being demyelinating conditions, the overlapping attributes of SACD can mimic those of MS. The unique subtleties in our case lead to the correct diagnosis and reversal of symptoms in what was thought to be a progressively irreversible disease. This case report calls for a more thorough diagnostic approach and insight into demyelinating disorders for improved patient outcomes, especially in light of reversible conditions, such as SACD.

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Poster Presentation No. 41

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The Elusive Differential: Non-Small Cell Cancer of the Lung with Elevated BhCG Levels in a Young Female Patient

Diagnosing malignancy is becoming more unique in both clinical and biological manifestation. Here, we present a case of over expression of BhCG in the setting of adenocarcinoma of the lung. 41-year-old female with a history tubal ligation presented with abdominal pain and weight loss. CT abdomen/pelvis demonstrated multiple nodular lesions in the right lung with pleural thickening, loculated pleural effusions, and soft tissue mass at T12. She was found to have an elevated BhCG on presentation (86 mIU/mL). Due to her elevated BhCG and abdominal pain, choriocarcinoma was suspected. In the past, she had multiple pleural effusions with many negative diagnostic thoracentesis. The patient then underwent a VATS with pleural biopsy; which was negative. Subsequently the paraspinal mass at T12 was biopsied. Pathology was most consistent with poorly differentiated TTF-1 negative adenocarcinoma of the lung. In the above case presentation, the primary malignancy was adenocarcinoma of the lung with expression of BhCG. This marker is measured in the setting of germ cell tumors and choriocarcinoma for staging, prognosis and response to treatment. Normally tumor markers that are expressed in non-small cell carcinoma of the lung include ALK gene, cytokeratin fragment 21-1 or EGFR. Further research is needed to establish a correlation between BhCG and non-small cell lung cancer. At which time, BhCG could be used as a tumor marker to assist in early diagnosis, response to treatment of adenocarcinoma of the lung; as well as a prognostic indicator.

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Poster Presentation No. 42

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Does Strict Glycemic Control Lead to Better Outcomes in Non-ICU Type II Diabetic Patients with Sepsis

This retrospective study included 395 type 2 diabetics who were admitted for sepsis between 2015-2017 in the Henry Ford System medical floor. The glucose well-controlled group length of stay was 6.41 days versus 5.95 days ($p=0.145$) in the uncontrolled group. 30-day mortality was 3.7% in the well-controlled group and 1.3% in the uncontrolled group ($p=0.266$). Re-admission rate at 3 months was 17.4% in the well-controlled group and 20.9% in the uncontrolled group ($p=0.503$). Sliding scale had glucose controlled success rate of 59.9% compared to 33.5% ($p<0.001$) with basal + bolus. Re-admission at 3 months was strongly associated with high Charlson's comorbidity score of 4.14($p=0.008$).

A study of 32,851 diabetics and non-diabetics found tight blood glucose control in non-critically ill patients is associated with a decreased length of stay. Our study was based on a similar study design, but only type 2 diabetics were included and the results didn't support the strong finding in the previous research. This study validated the importance of Charlson's comorbidity score in prediction of re-admission. Our study suggested sliding scale is superior to basal + bolus in glucose control. However, 73% of patients placed on sliding scale came to the hospital with A1c < 7.5 and took an oral agent at home. In this group of patients, the glucose will fall in well-controlled range even without sliding scale. Therefore, there is no benefit of using sliding scale over oral agents.

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Poster Presentation No. 43

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Hydralazine Induced Alveolar Hemorrhage in Drug Induced Lupus

Hydralazine, commonly used to treat hypertension, is most notorious for its' several variable and debilitating side effects including drug induced lupus erythematosus (DILE). Not only is DILE associated with Hydralazine, but there have been some case reports linking Hydralazine to ANCA-associated glomerulonephritis and vasculitis. The concern is that this vasculitis can cause a serious complication known as Diffuse Alveolar Hemorrhage (DAH) which has a very high mortality rate. We report a case of Hydralazine induced vasculitis presenting as DAH in a patient with known systemic lupus erythematosus (SLE) and recent diagnosis of lupus nephritis. She was treated with hemodialysis (HD) and plasmapheresis as well as a course of pulse dosed steroids. Immunosuppressive therapy was not initiated during her hospital course due to pneumonia and herpes epiglottitis. She was found to be myeloperoxidase (MPO) antineutrophil cytoplasmic antibody (ANCA) and anti-histone antibody positive. We concluded that hydralazine induced MPO-ANCA vasculitis can rarely present with DAH in a patient who has been taking hydralazine for years and requires prompt cessation of the medication. Treatment modalities are variable and involve hemodialysis, plasmapheresis, and even immunosuppressive therapy which may be needed for complete resolution of symptoms.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 44

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Daptomycin-Induced Organizing Pneumonia

Intro:

Organizing pneumonia is defined as intraalveolar buds of granulation tissue consisting of fibroblasts and myofibroblasts. Cryptogenic organizing pneumonia (COP) is typically regarded as an idiopathic interstitial pneumonia. Secondary causes includes a multitude of etiologies including medications. Drug induced organizing pneumonia is uncommon but has been reported in the past from a variety of medications. We report a case of possible daptomycin induced organizing pneumonia.

Case Description:

A 76 year old female presented to the emergency department with progressive dyspnea on exertion. Four weeks prior, the patient started a six-week course of Daptomycin for an infected prosthetic knee joint. Chest x-ray revealed patchy pulmonary infiltrates bilaterally. Non-contrast CT thorax revealed extensive interstitial disease with groundglass opacities and irregular peripheral consolidation. Daptomycin was discontinued. IV steroids were initiated on hospital day five. Open lung biopsies were obtained revealing COP (Eosinophilic pneumonia could not be excluded). Patient's symptoms and oxygen requirements improved. Imaging remained unchanged. Patient was medically stable for discharge to rehab with home O2.

Discussion:

Histologically there is no difference between secondary organizing pneumonia and COP. Diagnosis of secondary organizing pneumonia requires careful history. Daptomycin-induced organizing pneumonia has been reported at least once in the past. Though eosinophilic pneumonia is in the differential, the biopsy were most consistent with organizing pneumonia. Mainstay treatment for secondary organizing pneumonia is treat underlying causes while steroids are typically reserved for COP. Few cases of daptomycin-Induced organizing pneumonia been described before, while more needs to be published in order to cite incidence.

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Poster Presentation No. 45

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'Keto Diet' Education for the Breastfeeding Mother, or Lack Thereof

It is not uncommon to come across promotions and praises of a 'ketogenic diet' in athletic and training magazines since the turn of the century. It is, however, common to unintentionally under-educate our patients regarding the physiology behind it and its possible consequences. We present a case of a young, otherwise healthy lactating mother of an 8-month old infant who was admitted to our hospital for severe high-anion gap metabolic acidosis as a result of starvation ketosis.

A 31-year old white lactating female began a ketogenic diet in an effort to lose the weight she had gained during pregnancy. After about 3 weeks of commencement of a LCHF (low-carb, high-fat) diet, she contracted a viral gastroenteritis which pushed her into a state of starvation ketosis. She presented to our hospital for extreme nausea and vomiting, with a pH of 7.08, anion gap of 23 and a base deficit of – 23. Over the next 2 days, she was treated with intravenous crystalloid fluid resuscitation, bicarbonate and insulin infusions followed by aggressive electrolyte replacement in order to combat the predictable re-feeding syndrome-like electrolyte derangements.

Although essentially a diagnosis of exclusion, starvation ketosis is a dangerous state of negative biochemical balance, often exacerbated by higher metabolic demand (i.e. lactation, infection etc.). It demands early recognition in the inpatient setting and is a prime example of how primary prevention necessitates a thorough approach to patient education regardless of the rarity of its incidence.

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Poster Presentation No. 46

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Recurrent and Treatment Refractory C. Difficile Colitis-A Harbinger of Lymphocytic Colitis?

Microscopic colitis is an inflammatory condition with diarrhea and normal endoscopy. MC is further divided into lymphocytic colitis and collagenous colitis. We present a case series of LC in patients with recurrent Clostridium Difficile infections. All four patients had evidence of recurrent diarrhea with C.diff infection in spite of multiple treatments. Three of four patients underwent fecal microbiota transplant for treatment. The colonic biopsies in all patients, following recurrent C.diff infection showed evidence of LC. All of these patients had resolution of diarrhea with treatment of LC. This suggests that bacteria disrupt the gastrointestinal microbiota, damaging epithelial layers and causing LC. It is already known that in collagenous colitis, the damage caused by the bacteria leads to collagen production in response to injury, inability to resorb collagen, failure of collagen production or failure of cellular control mechanisms. This may be a similar mechanism after recurrent C. diff infection.

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Poster Presentation No. 47

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Pasteurella Arthritis in a Non-Surgical Joint

Pasteurella Multocida is a virulent pathogen classically associated with cats and birds. Human infections have been reported prior typically associated with an animal scratch or bite. Soft tissue abscess formation is most common.

We present a case of Bacteremia and non-prosthetic septic arthritis. 74 y.o. Female with a history of bilateral total knee replacement and rheumatoid arthritis on long-term Methotrexate and Prednisone presented with fever with right knee and left-great toe joint pain and swelling. Blood culture was positive for *Pasteurella Multocida*. The patient underwent incision and drainage with a placement of antibiotic beads in the right knee joint. The inflammation in her left great toe was initially treated as an acute gout flare. Due to unresponsiveness to treatment, Arthrocentesis of left-great toe was performed and synovial fluid culture was positive for *Pasteurella Multocida*.

Cases reporting *Pasteurella* Arthritis are rare and usually associated with immunosuppression and prosthesis. This case is pointing up the invasive potential of *Pasteurella Multocida* in an immunocompromised host, which led to Bacteremia and septic oligoarthritis in both Surgical and non-Surgical joints, without direct penetrating injury to the joint or skin. *Pasteurella* septic arthritis in recent arthroplasties has been quoted as aggressive and difficult to contain, and patients on Immunosuppressant and prosthetic joints with history of recent cat exposure should have a low threshold for arthrocentesis for fluid analysis and culture, and early empiric antibiotics administration.

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Poster Presentation No. 48

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The Not so Meek and Mild Meigs Syndrome

Introduction: Undifferentiated connective tissue disease (UCTD) can have varying initial presentations. One rare initial presentation is that of Pseudo-Pseudo Meigs syndrome (PPMS) with ascites, pleural effusion and elevated CA-125 as presented below.

Case: 56 year old female presented with abdominal distention for a few weeks and difficulty breathing. Outpatient labs showed a cholestatic picture and CT Abdomen showed possible Peritoneal Carcinomatosis. She failed outpatient diuretic therapy and was admitted due to worsening respiratory status. She was found to have bilateral pleural effusions, pericardial effusion, and ascites; underwent bilateral chest tube insertion, a pericardial window, paracentesis and omental biopsy. Fluid cytology, pericardial and omental biopsy were all negative for malignant cells. Autoimmune work up showed positive ANA (1:320 speckled), p-ANCA, RF, with elevated Ca-125, IgA, IgM, and ESR of 74mm/Hr. Rheumatology was consulted, diagnosing her to have PPMS due to UCTD. She responded to treatment with prednisone 20mg daily.

Discussion: Diagnosing autoimmune diseases require a high degree of suspicion. Our patient had ascites, pleural effusions, and elevated CA-125 pointing to PPMS. The leading hypothesis for the pathophysiology of ascites in PPMS is thought to be from uncontrolled inflammation resulting from accumulation of plasma cells and immune complexes on the peritoneum triggering a local inflammatory reaction. Development of pleural effusions in PPMS is likely due to communication with the peritoneal cavity and transfer of fluid through diaphragmatic apertures. This case shows us a rare initial presentation of UCTD, it is important to rule out oncologic sources to ensure efficient management.

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Poster Presentation No. 49

Presenter: Kewan Hamid

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Predicting Fluid Responsiveness with Sonographic Assessment of Inferior Vena Cava Diameter in Patients with Sepsis

Abstract

Background: Sonographic assessment of inferior vena cava diameter (Δ DIVC) has been shown to have a role in predicting fluid responsiveness in critically-ill patients. However, results from previous studies may have been confounded by its heterogeneity. We conducted a systematic review and meta-analysis of observational studies with the primary objective of assessing the diagnostic accuracy of Δ DIVC in predicting fluid responsiveness among septic patients.

Methods: Electronic searches for studies were conducted using appropriate terms. Inclusion criteria were: (1) observational full text studies of any age (2) recognized reference standard for fluid responsiveness (3) stratified patients into fluid responders (FRs) and non-responders (NFRs) (4) provided adequate individual patient data and used summary statistics to describe results. Age group, definition and criteria of fluid responsiveness, use of mechanical ventilation (MV), summary statistics and study design, size, and setting were abstracted.

Results: Thirteen studies involving 777 SPPs were included, of which 353 were FRs and 424 were NFRs. The pooled sensitivity and specificity for a positive Δ DIVC measurement of fluid responsiveness was 0.76 (95% confidence interval [CI]: 0.60–0.87) and 0.86 (0.73–0.93), respectively. Summary receiver operating characteristic curve was 0.88 (0.85–0.91). In subgroup analysis, Δ DIVC was more predictive of fluid responsiveness in ventilated septic patients.

Conclusion: Sonographic assessment of Δ DIVC is of clinical value in predicting fluid responsiveness in patients with sepsis. A negative finding using Δ DIVC cannot exclude fluid responsiveness, however a positive test can be valuable in guiding management decisions in this clinical setting

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Poster Presentation No. 50

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Warfarin-Induced Spontaneous Iliopsoas Hematoma – An Unusual Complication!

Introduction:

Warfarin is a commonly prescribed anticoagulant with a narrow therapeutic-window and high-potential for serious complications. Spontaneous psoas hematoma is a rare complication of warfarin which can result in significant neurological deficits.

Case presentation:

A 91-year-old gentleman with a medical history of atrial fibrillation on warfarin, brought to the hospital for a 1-week history of worsening right thigh pain, radiating to his right lower leg (RLL) with loss of ambulation secondary to his increasing weakness. He denies any history of falls/trauma. On examination, he was hemodynamically stable. Neurological examination was significant for wasting of the right quadriceps, 1/5 power at hip-flexors, reduced sensations at L2-4 distribution, and hyporeflexia. Initial investigations showed a supra-therapeutic INR at 5.31. A contrast-enhanced CT scan showed a 6.0x5.3x8.0cm right psoas hematoma with no evidence of active bleeding. His warfarin was initially reversed and he underwent an unsuccessful CT-guided hematoma drainage. A decision was made for conservative management given his stable hemodynamic status without worsening symptoms or radiographical findings. After undergoing extensive physical therapy, he began to ambulate and recover slowly.

Conclusion:

Spontaneous iliopsoas hematoma is a rare complication of warfarin therapy. The management depends on the patient's hemodynamic status, co-morbidities, and the presence of active bleeding. Treatment strategies could include surgical decompression, intervention radiology, and/or conservative approaches with cessation/reversal of warfarin along with physical therapy. Physicians should be aware of such complication in any patients presenting with lower limb symptoms to avoid catastrophic permanent neurological deficits.

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Poster Presentation No. 51

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Methotrexate-Associated Lymphoproliferative Disorders

Introduction: Methotrexate (MTX) is a commonly used drug for treatment of patients with autoimmune diseases. However MTX has also been associated with lymphoproliferative disorders (LPD), mostly Epstein-Barr-virus (EBV) positive and CD10 negative lymphoma. We report a rare case of EBV-negative/CD10 positive methotrexate-associated large B-cell lymphoma presented with compression fracture.

Case presentation: A 73-year-old Caucasian female with past medical history of mixed connective tissue disorder (RA, lupus, scleroderma) on MTX for ten years. She presented to the emergency department for progressive lower back pain, bilateral lower limb (LL) weakness, and urinary incontinence. Neurological examination showed reduced LL power 3/5 with reduced sensation and diminished reflexes. Initial MRI scan of the spine revealed T2 compression fracture with presence of lesion, significant thoracic cord compression and multilevel lumbar spinal stenosis. She underwent T2 laminectomy, resection of epidural mass at T2, laminectomy from L1-L5 with L1-S1 fusion. Biopsy of T2 lesion was significant for EBV-negative methotrexate-associated lymphoproliferative disorder, resembling diffuse large B-cell lymphoma, germinal center type. Her MTX was discontinued during hospital admission. However, she will be starting chemotherapy (CHOP+R) given her EBV-positive/C10-negative status. She is progressing slowly with extensive physical therapy.

Conclusion: MXT can be associated with (LPD) and a majority of cases are EBV-positive/C10-negative. Although watchful waiting and cessation of MXT is an acceptable treatment strategy, in this case the EBV-negative/C10-positive status suggested it may continue to progress independently, therefore treatment was recommended. Physicians should be aware of such rare but important complications of MXT and regular treatment monitoring is recommended.

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Poster Presentation No. 52

Presenter: Hadi Abou-Rass

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Don't Whip It- A Case of Nitrous Oxide Abuse and B12 Deficiency

Nitrous oxide has been known to interfere with b12 function and cause effective b12 deficiency and the sequela associated with it, including subacute combined degeneration. Whippits are cannisters containing nitrous oxide and are easily obtained and abused as a recreational drug.

A 22 year old male presented to the hospital with complaints of distal upper and lower extremity paresthesias of 2 weeks duration and recent unsteadiness of gait with subsequent falls. He denied alcohol abuse but admitted to tobacco use and daily marijuana use. Initial labs, including Hgb and MCV, were normal. A lumbar puncture was non-revealing. MRI of the cervical spine revealed abnormal T2 signal of bilateral dorsal column and he was started on IV steroids for suspected transverse myelitis. Brain and thoracic MRI were unrevealing. B12 level, obtained on admission, eventually returned and was low at 152 pg/ml and he was started on vitamin b12 supplementation. Homocysteine and methylmalonic acid were subsequently obtained and elevated at 83.9 micromole/L and 8,438 nMol/L, respectively. It was later discovered that the patient had been abusing whippits regularly. With b12 replacement, cessation of offending agent, and physical therapy the patient showed some improvement in his symptoms by the end of his hospital course. He was discharged with vitamin b12 supplementation and psychiatric follow-up.

This case shows the importance of a thorough social history in investigating a lesser known cause of subacute combined degeneration.

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Poster Presentation No. 53

Presenter: Tate Bonifer

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Multi-Organ Dysfunction Syndrome or Metformin Associated Lactic Acidosis?

A patient with respiratory distress and sepsis leading to multi-organ dysfunction syndrome (MODS) will undergo a similar workup including laboratory testing, cultures, and imaging. But what happens when no source is identified?

A 75 year-old female with PMH of cardiac arrest and diabetes mellitus presented to our ED with generalized weakness and shortness of breath. On exam, she was in respiratory distress, confused and weak. Her lab work showed a WBC count of 33.5 and lactic acid of 19.2. She was admitted to the ICU, intubated and started on broad spectrum antibiotics. Our workup included a variety of imaging studies, urinalysis, blood, and cerebrospinal fluid cultures. No source was identified, however, she improved with antibiotics and IV fluid resuscitation. As a result, we believe her lactic acidosis was secondary to metformin use.

Metformin associated lactic acidosis is a rare, but life-threatening condition, which may be confused with MODS or septic shock, as it was in our patient. Studies have shown it occurs in 2-9 cases per 100,000 person-years. Despite its rarity, it should be considered in patients taking metformin who present to the ED with vague or nonspecific symptoms such as anorexia, nausea, vomiting, abdominal pain, lethargy, hyperventilation and hypotension. This may be more common in patients who are predisposed to hypoperfusion or hypoxemia, such as those with renal impairment, heart failure, pulmonary decompensation, sepsis, or dehydration. Our patient had several of these risk factors including dehydration and heart failure.

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Poster Presentation No. 54

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Mystery in the Mediastinum

Fibrosing mediastinitis is believed to be sequelae of *Histoplasma capsulatum* infection. Fibrosing mediastinitis begins as an asymptomatic pulmonary infection and before a specific cell-mediated immune response develops, it can disseminate to mediastinal nodes and organs. Mediastinal lymph nodes can form into a granuloma and can progress to sclerosing disease such as fibrosing mediastinitis. Tissues of these patients rarely reveal viable organisms, while cultures and antigen tests are usually negative.

We present the case of a 48 year old woman who presented with a two month history of worsening pleuritic chest pain and dyspnea. Of note, she had been hospitalized over ten years prior with bilateral pulmonary nodules found to be non-necrotizing granulomas on biopsy. She improved with conservative management. On this occasion, CT thorax revealed a moderate pericardial effusion, large anterior mediastinal mass, and mediastinal lymphadenopathy. The patient developed pericardial tamponade and underwent emergent pericardial window. Tissue demonstrated fibrinous pericarditis and pericardial fluid was negative for malignancy, tuberculosis, fungal or bacterial elements. Endoscopically obtained biopsy of the mediastinal mass revealed benign lymphocytes, lymph node tissue, and many non-necrotizing epithelioid granulomas. Subsequent mediastinotomy revealed non-necrotizing granulomas and several infarct-like necrotic nodules, questionable for histoplasmosis vs. sarcoidosis. Tissue cultures, bacterial 16srRNA, and fungal 18srRNA amplification were negative.

Mediastinitis from histoplasmosis is notoriously culture negative with only 29% of patients having a positive culture. This makes definitive diagnosis of histoplasmosis or sarcoidosis difficult and the best management approach remains a challenge.

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Poster Presentation No. 55

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Bilateral Thalamic Infarcts Following Cannabis Exposure

Bilateral paramedian thalamic infarcts are rare ischemic strokes. They typically arise from occlusion of the artery of Percheron—an uncommon anatomic variant originating from the posterior cerebral artery that supplies the bilateral thalami. These infarcts often lead to a severe amnesic-confabulatory syndrome, as well as dysexecutive deficits. Our case discusses these findings in a young, healthy adult female.

A 29 year-old healthy female was brought to the emergency department by her boyfriend for altered mental status of two days duration. She was increasingly lethargic with nonsensical speech. Her serum & urine toxin screens were negative, with the exception of cannabinoids—which the boyfriend admitted they smoked the day prior. The patient was disoriented, somnolent, inappropriately crying & laughing, and was confabulating. Her physical exam and laboratory work-up were otherwise unremarkable. Non-contrast CT of the head revealed focal hypodensities in the thalami bilaterally. The following morning, MRI was obtained which revealed acute ischemic infarct of the bilateral thalami. She was provided a full-dose aspirin, but was out of the window to receive thrombolytics. No etiology was found. The patient's level of consciousness improved throughout the admission, however, her neuropsychological impairments persisted.

This case illustrates a combination of rare phenomenon: ischemic stroke in a young patient, presence of an artery of Percheron, and bilateral paramedian thalamic infarcts. Our patient had no known atherosclerotic disease, was a non-smoker, not on oral contraceptives, and had no history of hypercoagulable disorder. Our case poses the question regarding a link between cannabis exposure & ischemic events.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 56

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A Rare and Unique Case of a Complicated Cerebral Venous Thrombosis Partially Recanalized with Mechanical Thrombectomy

Cerebral venous thrombosis is a rare phenomenon that most often occurs in younger females and has been associated with the use of birth control. Rarely, this can be complicated with an infarction leading to epileptic seizures. Limited data exists on the benefits of mechanical thrombectomy in patients without focal neurological deficits. Here we report a rare case of a 31 year-old African American female who presented to the ED with an acute headache, nausea, vomiting on two separate occasions. Initially she was diagnosed with and treated as an uncomplicated headache. She returned the following day with altered mental status and had two witnessed seizures. Imaging on her second visit revealed thrombosis of the right transverse sinus with propagation into the right internal jugular vein complicated by an ischemic stroke with hemorrhagic transformation. Mechanical thrombectomy was performed and partial thrombectomy of the internal jugular and transverse venous sinuses were achieved. The patient had no residual deficits despite the partial thrombectomy. Further history revealed the patient was recently started on oral contraceptives. A correct and early diagnosis of cerebral venous thrombosis in patients with risk factors such as OCP use, combined with heparin-based therapy and/or interventional endovascular strategies may be of benefit in preventing intracerebral extension of jugular venous thrombosis and subsequent serious or even fatal neurological sequelae.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 57

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A Rare Presentation of Severe Leukemoid Reaction to Clostridium Difficile Infection

Introduction: Clostridium difficile (C.diff) is a common bacterial pathogen isolated in patients with colitis in health care settings. Although leukocytosis is present, leukemoid reactions are uncommon and associated with a high mortality. We report a rare case of Clostridium difficile infection that resolved appropriately, despite a leukocyte count of $90.28 \times 10^3/\mu\text{L}$.

Case Summary: 79 year old female with multiple comorbidities presented with malodorous watery diarrhea and abdominal cramps for two weeks. Stools were like cottage cheese in consistency without blood or mucus. She denied fevers, chills, recent travel, antibiotic use, or immunosuppressive conditions. She was recently hospitalized with dyspnea. On examination, abdomen was soft, non-distended with normoactive bowel sounds. Workup revealed a leukocyte count of $90.28 \times 10^3/\mu\text{L}$ and positive C.diff PCR. BCR-ABL test was negative. Intravenous hydration and oral vancomycin were started. Her symptoms and leukocyte count improved, and she was discharged on oral vancomycin for total of 14 days. Subsequent labs demonstrated resolution of leukocytosis.

Discussion and Conclusion: C.diff infection may present on a continuum of mild diarrhea to pseudomembranous colitis. It presents with abdominal pain, fever and diarrhea. Risk factors include antibiotic use, hospital exposure, old age and previous infection. In patients with a high pre-test probability, empiric therapy should be initiated. C.diff infection rarely presents with leukemoid reactions. Patients with leukemoid reaction usually do not spike fever, as seen in our patient. Literature has shown that mortality rate is 100% in patients with leukemoid reaction, with counts above $50 \times 10^3/\mu\text{L}$ was 100%. Our patient survived despite a white count of $90.28 \times 10^3/\mu\text{L}$.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 58

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A Rare Case of Acute Cefepime-Induced Neurotoxicity

Cefepime is a common agent used for its coverage of MDR organisms. While generally well tolerated, cefepime has been found to cause a variety of different neurologic effects including seizures, non-convulsive status epilepticus, hallucinations, and encephalopathy. We present a case of acute onset encephalopathy attributed to cefepime.

A 72 year old male with dilated cardiomyopathy, CAD with CABG, CKD stage III, DM type II, and severe PVD with a right BKA who had been admitted about 1 month prior due to a fistula and *Pseudomonas aeruginosa* infection of his old sternotomy incision and underwent debridement and treatment with Cefepime. He was discharged home with 2 weeks of outpatient cefepime. He re-presented to the ED 1 week after being discharged home with the sudden onset of confusion, memory loss, and personality changes. Vital signs were all stable. The patient was severely encephalopathic, responding only with profanities. Physical exam was without any focal neurologic deficits or other significant abnormalities. Workup was significant for a Cr of 3.5 (baseline of 2) and a BUN of 67 (baseline 45). There were no other metabolic derangements, no signs of infection, CT head was unremarkable. Cefepime neurotoxicity was considered and cefepime was stopped with complete resolution of the patient's symptoms over the next 3 days.

Cefepime neurotoxicity has become increasingly more recognized, and patient with renal injury seem to have a higher rate of occurrence. Widespread physician awareness of this is important to ensure proper dosing as well as to prevent and decrease patient morbidity.

Poster Presentation No. 59

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Cefepime: A Nightmare in Disguise

Cefepime is a fourth generation cephalosporin antibiotic, with few severe adverse reactions. Cefepime-induced neurotoxicity is a rare adverse event, complicating the hospital course of high-risk patients.

A 67-year-old woman was admitted for severe right foot ulceration and acute kidney injury. Initial diagnostic work up was negative for osteomyelitis and systemic infection. Empiric antimicrobial therapy was commenced with renally adjusted IV Cefepime and oral Flagyl. On hospital day 3, she developed acute onset confusion, lethargy, and aphasia. Extensive diagnostic work up including head CT without contrast, chest x-ray, repeat urine and blood cultures, complete blood count, comprehensive metabolic panel, coagulation panel, serum ammonia, creatine kinase, and arterial blood gas were unremarkable. All sedatives and neurotoxic agents including Methadone, anticholinergics, and benzodiazepines were discontinued. Despite negative work up and discontinuation of all sedatives and opiates, the patient continued to manifest confusion, lethargy, aphasia, and distal myoclonus. Repeat head CT without contrast and MRI brain ruled out acute stroke. EEG showed generalized slowing and irregular periods with triphasic waveforms. Cefepime induced neurotoxicity was suspected as the diagnosis of exclusion. Within 48 hours of its discontinuation the patient's acute neurological manifestations completely resolved and she returned to baseline.

Recognition of Cefepime-induced neurotoxicity is often challenging, complicating the hospital course of acutely ill patients. Delays in treatment can lead to increased costs, longer hospitalizations, and most importantly poor patient outcomes.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 60

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A Rare Case of Metastatic Primary Signet-Ring Cell Adenocarcinoma of Appendix (SRCAA) Presenting as Acute Appendicitis

Primary signet-ring cell appendiceal adenocarcinoma is an exceedingly rare cause of acute abdomen comprising 4% of all primary appendiceal neoplasms. A 50-year-old Caucasian male with history of hypertension, diverticulitis, nicotine dependence and a family history of bladder cancer presented within 24 hrs of an acute abdomen. He reported initial onset of periumbilical pain with later localization to the right lower quadrant associated with non-bloody, non-bilious emesis, mucosy diarrhea and diaphoresis. Computed tomography showed a 10mm dilated appendix with surrounding fat stranding and pelvic free fluid. Patient was taken to the operating room for an appendectomy. Instead, multiple-site biopsies were taken due to concern for metastatic spread. CA-125 was at 50 U/mL. Pathology revealed primary metastatic appendiceal adenocarcinoma. Outpatient endoscopies revealed transverse colon tubular adenoma and a sessile polyp within the distal sigmoid colon. In a week, he underwent omentectomy, intraoperative ultrasound of liver, cystoscopy and bilateral ureteral catheter placement. Hyperthermic Intraperitoneal Chemotherapy was not performed due to the significant disease. Biopsies demonstrated high-grade metastatic signet-ring cell appendiceal adenocarcinoma. He was transferred to oncology with plan for chemotherapy and genetic counseling. This case illustrates a rare presentation of metastatic primary signet-ring cell appendiceal adenocarcinoma. It usually presents as right lower quadrant abdominal pain indistinguishable from acute appendicitis (supported by < 10 cases). At presentation, there are no specific computed tomography findings other than spread to the adjacent organs (76%). 5-year survival is estimated at 27%. Optimal treatment is unknown but literatures support use of (Folinic acid, 5-FU, Oxaliplatin [FOLFOX] and Bevacizumab).

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 61

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Mitral Annular Calcification: Benign However Could be Fatal

Introduction:

Mitral annular calcification (MAC) is a common finding in elder population, especially women. Despite its benign course, it could be a potential source for cardio-embolic events.

Case description:

A 67 years old healthy female presented to ED with right arm tingling, weakness and speech difficulty started 3 hours ago. On physical exam, patient had a mild weakness of the right arm with pain and touch sensation preserved. CT head without contrast was negative. MRI revealed multiple punctate areas of infarctions involving right cerebellum, bilateral parietal-occipital lobes. Hence, CT angiogram of head and neck showed normal neck vessels with no significant stenosis. Interestingly, TTE revealed an oval homogenous echo dense mass attached to the posterior mitral valve consisted of fixed and mobile portions measuring 0.9 x 0.8 cm and 0.6 x 0.7 cm, respectively. Also significant MAC was noticed. TEE showed highly echo dense mass attached to the posterior mitral leaflet that could be calcified tumor, vegetation or thrombus. Patient underwent open thoracotomy, which included removal of the mass with its mobile portion. Pathology showed numerous calcifications, granulation tissue, inflammatory cells and areas of ulceration. These pathological findings were suggestive of MAC (fixed portion) associated with regenerative tissue (mobile portion).

Conclusion:

The incidence of embolism from MAC is still unclear. Main mechanism of embolization in cases of MAC is the reactive inflammatory response against seemingly foreign body (calcium) which results in ulceration then detachment of calcific emboli. This case illustrates a benign however a potential source of cardio-embolic strokes.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 62

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Baroreceptor Failure

Introduction:

An absence of baroreceptor reflex can result in a severe, transient or permanent increase in blood pressure. Sustained elevation in blood pressure can eventually result in hypertensive urgency and/or emergency.

Case:

A 62 year old male with past medical history of uncontrolled hypertension, left internal carotid artery aneurysm, transient ischemic attacks and chronic right vertebral artery dissection presented to the emergency department for sudden onset of headache, blurred vision and bilateral upper extremity weakness and numbness. Patient reported extremely high blood pressures at home which were difficult to control with his home antihypertensive medications. Vital signs in emergency department were significant for blood pressure of 230/120. Physical exam was not significant for any focal neurological deficits. Computed tomography scan of the head was unremarkable. Nicardipine infusion was initiated to adequately control the blood pressure. Extreme fluctuation in blood pressure was noted when attempts were made to transition the patient to oral antihypertensive medications. Patient remained asymptomatic throughout these fluctuations. An intravenous nitroprusside infusion test was carried out to assess the absence of baroreflex and absence of tachycardia was indicative of baroreceptor failure. Clonidine therapy was initiated which controlled the blood pressure adequately.

Discussion :

Baroreceptor failure typically presents with labile blood pressure which is not amenable to conventional antihypertensive medications. It is an important differential to consider in patients with history of neck surgery, neck radiation or any vascular pathology involving the carotid vessels. Once diagnosed, management and prognosis is good with centrally acting antihypertensive medications such as clonidine.

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Poster Presentation No. 63

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Racial/Ethnic and Socioeconomic Disparities in Gastric Cancer

Background: Racial/ethnic and socioeconomic status disparities play an important role in cancer incidence and mortality. We aimed to investigate those disparities in gastric cancer (GC).

Method: MEDLINE and Scopus databases were searched for relevant studies using the following MeSH terms: ((gastric cancer[MeSH Terms]) AND factor, socioeconomic[MeSH Terms]) AND race.

Results: Most studies showed that Asians had the highest incidence of GC, and whites the lowest incidence. Blacks seemed to have higher rates of GC compared to whites, and Hispanics higher rates compared to blacks and whites. Higher socioeconomic status was associated with a lower risk of GC in most studies, but one Iranian study reported that GC incidence had no consistent pattern according to socioeconomic position. In addition to existing differences in treatment strategies of GC between Eastern and Western countries, the studies showed that blacks were less likely to receive adjuvant radiation therapy (RT) and multimodality treatment. Lower income status was associated with lower rate of adjuvant RT. Asian or Pacific Islander ethnicity conferred higher survival rate when compared to other ethnicities, whether short-term or long-term survival. Recurrence-free survival in Asian populations was also significantly longer than in non-Asian populations. Results about survival based on race/ethnicity for blacks, whites and Hispanics were inconsistent.

Conclusion: Asians have the highest GC incidence and best survival, but the incidence and survival difference among other ethnicities is unclear based on current studies. Low socioeconomic status was associated with increased GC incidence, but the finding is not consistent among countries.

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Poster Presentation No. 64

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Renal Cell Carcinoma Presenting with Pulmonary Tumor Embolism and Inferior Vena Cava Thrombosis

Introduction: Pulmonary tumor embolism (PTE) along with inferior vena cava (IVC) thrombosis is a rare presentation of RCC. Its extension to IVC poses a great challenge since there is significant risk of its dislodgement which could be life threatening. We report a case of RCC that presented with PTE and IVC tumor thrombosis that was successfully treated with nephrectomy and embolectomy.

Case: A 59 year old female presented with shortness of breath and palpitations for 3 days. She was tachycardic, tachypneic and hypoxic. Initial labs showed creatinine elevation (2.88 mg/dL), so Ventilation/Perfusion scan was performed which re-vealed multiple large bilateral mismatch perfusion defects suggesting high probability for PE. She was started on IV heparin. Echocardiogram showed a large thrombus occluding the IVC close to the right atrium. Abdominal ultrasound demonstrated a large isoechoic superior pole right renal mass and a IVC thrombus/mass. MRI abdomen confirmed it as renal cell carcinoma on the right, invading the renal vein and IVC. She then underwent pulmonary embolectomy and right nephrectomy under hypothermic circulatory arrest, following which the sample was analyzed and revealed gelatinous tumor emboli secondary to RCC.

Discussion: RCC is a highly vascular tumor that can gain access to the right side of the heart by invading the IVC. IVC extension of RCC occurs in 4 -10% of patients, with only 1% reaching the right atrium. Management of these cases can be challenging, with an operative mortality rate of up to 40%.

Poster Presentation No. 65

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Rapid Onset Idiopathic Thrombocytopenic Purpura Post-Influenza Vaccination

Common causes of Idiopathic Thrombocytopenic Purpura (ITP) include infections, medications and autoimmune diseases. In ITP, low platelet counts may cause significant bleeding. Physicians should be aware of this possible complication following influenza vaccination.

A 68-year-old male with a history of hepatitis C (baseline platelet count $250 \times 10^3/\mu\text{L}$) was admitted for severe epistaxis. The patient received the influenza vaccine three days before admission. Eight hours later, he developed bilateral epistaxis, hematuria and oral bleeding. Vitals stable on admission. He had hemorrhagic bullae on the tongue and buccal mucosa and purpura on his lower extremities. Work-up showed isolated thrombocytopenia. Platelet count was $0 \times 10^3/\mu\text{L}$, Hemoglobin 13.2g/dL and WBC $11.1 \times 10^3/\mu\text{L}$. D-dimer was 2.09 mg/L, with normal PT/PTT and Fibrinogen levels. Peripheral blood smear showed lightly granulated platelets, normal red and white cell morphology. Hepatitis C viral load and HIV were negative. Patient was diagnosed with ITP and given 1 dose of IV immunoglobulin (IVIG), 3 doses of dexamethasone and 3 units of platelets. Platelet count improved to 85,000/ μL and patient was discharged on a prednisone taper. Platelets returned to baseline 2 weeks after.

Around 149.2 million Americans received the flu vaccine from July 2016 to May 2017. ITP has been reported after influenza vaccination but the association remains unclear. A history of minor bleeding may be elicited from patients after the vaccine. Corticosteroids are the drug of choice for initial management of acute ITP. Other options include IVIG, RhIG and Rituximab. Platelet transfusion is indicated for clinically significant bleeding but not as prophylaxis.

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Poster Presentation No. 66

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Late Onset Hemophagocytic Lymphohistiocytosis with No Identifiable Trigger Factors

Hemophagocytic lymphohistiocytosis (HLH) is a disease of excessive immune activation. It is predominantly seen in the pediatric population and is rare in adults. It's either due to mutation or triggered by an infection, malignancy, or rheumatologic disorder. We report a case of HLH with no HLH associated mutation or any identifiable trigger factor.

A 38-year-old male who presented to the clinic with night sweats, chills, and fatigue for 5 months. His abdominal examination was remarkable for mild splenomegaly. His labs were remarkable for neutropenia with WBC low at 1.2×10^9 , low fibrinogen of < 50 mg/dL, elevated ferritin of 5334 ng/mL, lactate dehydrogenase of 852 U/L, and elevated sCD25. His bone marrow biopsy showed granulopoiesis, hyperplastic megakaryopoiesis, and suspicious erythrophagocytosis. The above findings were consistent with HLH. He was started on dexamethasone 20 mg daily, etoposide 150 mg/m² IV twice weekly for 2 weeks, then weekly injections for a total of 8 weeks. His HLH genetic panel was negative for pathogenic mutations, and rheumatological workup was negative. After his relapse, the above regimen was restarted and is planned for bone marrow transplantation. Also, gene sequencing is planned to identify possible new mutations associated with adult HLH.

HLH is a macrophage-related syndrome with lack of downregulation of activated macrophages and lymphocytes leading to excessive inflammation and tissue destruction. Treatment of adult HLH is based on expert opinion rather than evidence-based practice since most data is gathered from pediatric patients.

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Poster Presentation No. 67

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Is Severity of Septic Shock Associated with Development of Delirium in Non-Intubated Patients?

Introduction

Sepsis induced encephalopathy has been described in literature with a prevalence ranging from 9% to as high as 71%. This study aims to establish a possible association between severity of septic shock and the severity of delirium in ICU population who are not mechanically ventilated.

Methods

This is a retrospective review of consecutive 8320 ICU patients admitted to the medical ICU of Sparrow Hospital. 569 patients having septic shock defined by SIRS with requirement of vasopressors and not intubated during the ICU stay were included. ICU-CAM was used to classify patients into delirium and non-delirium groups. SOFA scores on day 1 were used for quantification of sepsis and the highest ever ICDSC scores were used for quantification of delirium.

Results

52.37 % of the included patients had documented delirium on ICU-CAM. The difference between the mean SOFA scores was not significant in patients with delirium and without delirium- 0.14 with a p value of 0.51. On linear regression analysis, there was no statistically significant association between SOFA and ICDSC scores with a p value of 0.75 after controlling for age and sex.

Conclusion

There is no significant correlation between severity of delirium and septic shock in non-intubated patients with septic shock. Further prospective studies will be required to corroborate the findings of this study.

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Poster Presentation No. 68

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Risk Factors and Predictors of Readmission Among Cancer Inpatients

Introduction

Hospital readmissions represent quality metric. Readmissions add to cost of care and inconvenience to patients. Whether readmissions are preventable is unclear as cancer care is complex. Our objective was to retrospectively identify readmission rates and identify predictors of readmission among cancer inpatients.

Methods

We conducted a retrospective cohort study which included all consecutive admissions between January and December 2013 at the general medical oncology floor. We conducted logistic regression analyses to identify predictors of readmission.

Results

There were 1210 admissions during the study period. Of these, 262 inpatients were readmitted within 30 days (22%). Among readmission, 57% females; Mean age (\pm SD): 63 ± 13 years; 78% Caucasians, 18% African Americans. Median (range) length of stay was 5(0-46) days. Common cancers were renal (72%), lymphoma (22%), lung (21%), breast (17%), gastric (11%). On bivariate analysis, renal and gastric cancers had higher readmission risk. Comorbidities such as infections, pulmonary, diabetes, anemia, venous thromboembolism (VTE) and higher AST on admission had increased readmission risk. Renal and gastric cancers, infection, pulmonary, diabetes, anemia, VTE, admission AST, hemoglobin and hematocrit remained independent predictors of cancer readmission.

Conclusions

Cancer inpatients had higher readmission rate. High readmission risk was observed among females, Caucasians and African Americans. Renal and gastric cancers had greatest risk among cancers. Cancer patients with infections, pulmonary, diabetes, anemia, VTE, high AST as comorbidities had increased readmission risk. Renal and gastric cancer, infections, pulmonary, diabetes, anemia, VTE, high AST, low hemoglobin and hematocrit independently predicted readmission risk among cancer inpatients.

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Poster Presentation No. 69

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A Curious Case of Abdominal Pain in the Elderly

Introduction: Geriatric abdominal pain is a common complaint. Solid retroperitoneal masses are uncommon and can be neoplastic or non neoplastic. We present a case of an elderly man with chronic abdominal pain secondary to a retroperitoneal mass found on Abdominal CT Scan.

Case Description: An 85 year male with a past medical history of hypertension, COPD, BPH, coronary artery disease and diverticulosis presented to the ER with vague abdominal pain for three weeks. Laboratory tests ruled out mesenteric ischemia and pancreatitis. A CT Abdomen demonstrated a retroperitoneal mass with retroperitoneal and axillary lymphadenopathy. A CT guided excisional biopsy of the right axillary lymph node demonstrated a Diffuse Large B cell Lymphoma arising from Nodular Lymphocyte, predominant Hodgkins Lymphoma. The unilateral bone biopsy, flow cytometry and cytogenetics tests were negative for proto-oncogenes, common translocations and apoptotic genes that promote oncogenesis. The patient is currently undergoing chemotherapy with Rituximab and Bendamustine.

Conclusions: Our patient's chronic abdominal pain was due to a solid retroperitoneal Diffuse Large B Cell Lymphoma arising from Nodular Lymphocyte Predominant Hodgkin Lymphoma mass. A literature review from 1972-2018 demonstrated only one similar retroperitoneal mass of Hodgkins Lymphoma. However, there are no current case reports of a Hodgkins Lymphoma arising from a Non Hodgkins Lymphoma. A third of all primary solid retroperitoneal neoplastic masses are Lymphomas, with Non Hodgkins Lymphoma as the most common. This case highlights the importance of maintaining a broad differential diagnoses for abdominal pain in the elderly and the oncologic diversity of lymphomas.

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Poster Presentation No. 70

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A Healthy Male with Sporadic Hemiplegic Migraine

Introduction: Sporadic Hemiplegic Migraine (SHM) is a rare form of migraine in which motor weakness occurs during migraine aura. Only 200 cases of SHM have been published, and estimated prevalence is 0.1%. Though SHM has a similar presentation to Cerebrovascular Accident (CVA), symptoms of SHM will present with an aura and will resolve within a few hours to a few days without trace of neurological deficits.

Case Report: A 56 year old male with a past medical history of vertigo presented with aphasia, ataxia, right sided paresthesia and weakness. Patient also reported dizziness and headache at the time of onset of symptoms. He had a similar presentation 2 years ago which was thought to be a TIA. A CT head, CT angiogram, and brain perfusion scan were unremarkable. MRI of the brain and brainstem demonstrated moderate cerebellar atrophy without acute infarct. He received Meclizine and Ibuprofen with resolution of his symptoms within 12 hours of admission. The patient was discharged home after 2 days of hospitalization with Ibuprofen and Sumatriptan.

Discussion: The diagnosis of SHM is clinical; the key features of diagnosis include reversible motor weakness in constellation with migraine aura. Mutations in the CACNA1A and ATP1AT genes have been identified in patients with SHM. Cortical edema or cerebellar atrophy may be present on neuroimaging. Neither genetic testing nor neuroimaging are required for the diagnosis of this disease. This case cements the importance of history and physical as the crux of any diagnosis, especially when differentiating CVA from SHM.

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Poster Presentation No. 71

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Indications and Complications of Midlines

Background: Peripheral venous access is challenging in patients with poor vasculature and those who need IV access for longer durations. Midlines have gained popularity in some hospitals as they can be kept in place for up to two weeks. However, there is no established evidence of benefits and risks. **Methods:** We performed a retrospective chart review to assess the indications and prevalence of Midlines' complications in our institution. Descriptive statistics were conducted using SPSS version 22. **Results:** A total of 440 Midlines were placed for 6 months, with 81% being ordered due to poor vascular access. Most lines were placed from first attempt (78%). The lines were inserted in the right upper extremity in 55% cases. The duration of the lines had a mean of 3 days. Seven patients developed deep vein thrombosis (DVT) and 5 patients had bacteremia when Midline was in place, while 9 had a DVT event and 1 had bacteremia after line removal. Six patients had a line site infection. 88% of Midlines had no complications with the most common complications being leaking and edema. The lines clogged in 2 patients. **Discussion:** Our data shows that Midlines exhibit benefits, but they are not without risk. There were only a very few clogged lines, however this seems to be due to under-documentation. In the end, Midlines would likely be preferred over central lines due to their wide range of benefits. However, their limitations and complications should be considered in order to best care for diverse patient populations.

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Poster Presentation No. 72

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Hyperammonemic Encephalopathy, a Rare Presentation of Valproic Acid Toxicity in the Absence of Liver Impairment

Introduction:

Hyperammonemia can occur due to a broad range of etiologies and is commonly found in the setting of liver impairment. However, the absence of liver pathology presents a diagnostic challenge. Valproic Acid (Valproate) toxicity has been associated with hyperammonemic encephalopathy, but it is a rare occurrence and can be overlooked.

Cases:

1) A 28-year-old woman presented with 3-days of altered mentation, elevated ammonia level and normal liver function. The patient's mentation improved with Lactulose therapy and was subsequently discharged. She had a readmission shortly thereafter with the same presentation. Patient was on Valproate for epilepsy treatment. Valproate levels were elevated, but discontinuing Valproate removed the inciting cause of encephalopathy. She improved with no further hospitalizations.

2) A 57-year-old woman presented with 2-hours of altered mentation after intentional overdose. Patient had elevated ammonia and Valproate levels without hepatic impairment. Discontinuation of Valproate and L-carnitine therapy improved patient's encephalopathy.

Discussion:

These cases represent a rare complication of Valproate use. Its effect on urea cycle is thought to be one possible explanation for hyperammonemia. Management includes discontinuation of the drug and symptomatic treatment with Lactulose. We also highlight L-carnitine as proposed treatment for such toxicity. It is important for clinicians to be mindful of both hepatic and non-hepatic causes of hyperammonemia. These patients remind us to act with benevolence, utilizing a stepwise approach to diagnosis and treatment in order to improve patient outcomes. In retrospect, in our first case such consideration would have prompted earlier discontinuation of Valproate, potentially avoiding hospital readmission.

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Poster Presentation No. 73

Presenter: Kennedy Iheanacho

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Infection in a Patient with Felty Syndrome

Introduction: Felty Syndrome is a rare condition that presents in patients with Rheumatoid Arthritis (RA) in roughly 1-3% of cases. This syndrome is characterized by the presence of RA, neutropenia and splenomegaly; however, splenomegaly is not required to make the diagnosis. Felty Syndrome is a potential complication of RA, and may present when the diagnosis of pre-existing RA is unknown.

Case Description: This is a case of an 82 year old male who presented to the hospital with complaints of cold symptoms. He had been suffering from a nonproductive cough for over 2 weeks with no constitutional symptoms. He had previous hospital visits due to other respiratory infections and gastroenteritis which were addressed with supportive therapy. His vital signs remained within normal limits. The abdominal component of his physical examination and CT scan revealed splenomegaly. Laboratory tests included WBC: 1.3 10⁹/L, Absolute lymphocyte: 0.7mm³, ANA Antinuclear Ab: positive, ANA Antinuclear titer: 1:1,280, Rheumatoid factor > 600 IU/ml, CCP: 626 U. Hematology and rheumatology were consulted, and he was diagnosed with Felty Syndrome for which he was started on rituximab and scheduled to follow up in the rheumatology clinic.

Discussion: This case is an example of how Felty Syndrome can present with symptoms of infection. RA may be unknown at the time presentation, so the clinician should keep a high index of suspicion for Felty Syndrome in cases with recurrent, infectious symptoms.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 74

Presenter: Ali Akram Khan

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Diabetic Myonecrosis- An Unusal, Yet Eexcruciatingly Painful & Debilitating Complication of Uncontrolled Diabetes

Introduction: Diabetic myonecrosis is a rare complication of long-standing, poorly controlled diabetes mellitus (DM), with around 200 published cases. It usually occurs in patients with microvascular complications.

Case description: A 43-year-old man presented with 4 week history of worsening left thigh pain. His past medical history included DM (glycated hemoglobin level 17.6%), diabetic neuropathy and micro-albuminuria. He had no family history of muscle disorders and was not on statin. He had presented 4 weeks ago for the same complaint. At that time X-Ray of the left femur showed no fracture. Lower extremity arterial and venous Doppler ultrasound imaging were normal. He was discharged with analgesics. On this admission the left thigh was firm, erythematous and tender. CT-scan of left lower extremity showed hyper-enhancing vastus medialis suggesting myonecrosis. TSH was normal and urine drug screen was negative. Patient improved with conservative management, analgesics, optimized glycemic control and low-dose aspirin.

Conclusions: Although self-limiting, diabetic myonecrosis often closely mimics cellulitis and deep venous thrombosis. Increased awareness of this rare complication can prevent delayed or missed diagnosis leading to increased morbidity, inappropriate treatment and unnecessary investigations. Diabetic myonecrosis should be considered in patients presenting with acute muscle pain and in whom other causes of thigh pain such as bacterial infection, immune myositis, venous and arterial thrombosis are ruled out. MRI is the test of choice and muscle biopsy need to be considered for atypical cases. Pain can persist over days to weeks. Treatment consists of glycemic control, antiplatelet therapy and bed rest.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 75

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A Case of Head Trauma Triggering ACEI Induced Angioedema

Introduction: In the United States, Angiotensin Converting Enzyme Inhibitors (ACEIs) are the main culprit of drug-induced angioedema. Patients most commonly present with swelling of the face or tongue and rarely with intestinal angioedema. A few cases in recent literature have identified a possible link between local trauma caused by spinal surgery or head and facial injuries and ACEIs induced angioedema. We present a case of ACEIs related angioedema in a patient with local head trauma.

Case Description: A 66 y/o male with history of hypertension and on Lisinopril for 10 years presented with tongue swelling after a head injury. The patient took 40 mg of Lisinopril early morning and a couple hours later slipped and hit his head. Immediately, the patient started experiencing tongue swelling. CT maxillofacial showed significant tongue enlargement. ENT performed a laryngoscopy which was negative for any masses. The patient received intravenous dexamethasone and diphenhydramine. Swelling resolved 2 days after discontinuing Lisinopril.

Conclusion: A literature review identified a few reported cases of neck surgery and facial trauma as potential causes of angioedema in patients on ACEIs. Some studies indicate that local inflammation causes the levels of bradykinin to increase; that, in combination with ACEIs induced inhibition of bradykinin breakdown causes an excessive level of bradykinin which then causes tissue edema. In our patient's case, we think the head trauma from the fall initiated the sequence of events leading to angioedema. Besides systemic steroids, the ultimate treatment is stopping Lisinopril.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 76

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Cryptococcal Meningitis Presenting with Diplopia

Introduction: Cryptococcal meningitis is a potentially fatal fungal opportunistic infection affecting immunocompromised patients. It affects 957,900 people worldwide every year. Most common symptoms are fever, malaise, headache, photophobia, and vomiting. Diplopia, as one of the presenting features, is not as commonly seen as these other symptoms.

Case Description: A 37 year old female with known history of HIV, not on HAART, was admitted with complaints of double vision, headache, photophobia and sinus congestion. On examination the patient had left sided deviation on right eye lateral gaze. Magnetic resonance venography ruled out cavernous sinus thrombosis. Lumbar puncture was done with CSF analysis which was positive for Cryptococcal meningitis. The patient received Liposomal Ampho-B 5mg /kg IV q 24 hrs + 5-Flucytosine 25mg/kg PO q 6 hrs for 14 days, followed by 6-8 weeks of high dose Fluconazole, and secondary prophylaxis. Her symptoms improved after the initiation of antifungals.

Conclusion: Diplopia is not one of the common presenting features of Cryptococcal meningitis. This was an interesting case due to its rare presentation with this symptom. Complications arise due to failure to recognize symptoms of raised intracranial pressure and start treatment in a timely manner. The mechanisms behind raised intracranial pressure are not clearly defined although clogging of arachnoid villi by Cryptococcus and subsequent reduction in resorption of CSF is thought to be one of the reasons.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 77

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Biopsy Showing Plasma Cell is Not Necessarily a Plasma Cell Neoplasm

Introduction: Plasmablastic lymphoma (PBL) is a difficult to diagnose aggressive B cell lymphoma. The diagnosis is challenging because tumor cells share resemblance to plasmablastic myeloma. It is seen most commonly in patients with HIV, immunosuppression and organ transplant.

Clinical Case: A 59 year old African American female, with recurrent ventral hernia in the past, presented with acute on chronic abdominal pain. CT abdomen described possible incarcerated ventral hernia. At the time of emergent laparotomy, a soft anterior abdominal wall soft mass was found. Initial pathology report was consistent with plasma cell myeloma (PCM). Multiple myeloma workup was pursued. Serum protein electrophoresis was polyclonal. Bone marrow biopsy showed 8% plasma cells. Bone survey showed multiple lucency in left femoral shaft. She was initially treated for PCM, however repeat pathology report from tertiary center showed atypical cells positive for MUM1, CD138, CMYC and negative for CD20, CD3 which was consistent with PBL. Thereby therapy was changed to cover PBL with Etoposide/Phosphate/Prednisone/Vincristine Sulfate/Cyclophosphamide/Doxorubicin Hydrochloride (EPOCH).

Conclusions: Our case is unique in that it was initially diagnosed as PCM but instead turned out to be PBL. PBL remains a diagnostic challenge due its similarities with PCM, but the treatments for the two conditions are different. In the process of B cells becoming plasma cells, centrocytes transform to plasmablasts before becoming mature plasma cells, which is thought to be the pathogenesis for this similarity. As clinicians it is imperative to investigate further patients with suspected PCM but with atypical immunohistochemistry.

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Poster Presentation No. 78

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Vanishing Lung Syndrome: A Rare Form of Bullous Lung Disease

Introduction: Giant bullous emphysema, or "Vanishing Lung Syndrome", occurs mainly in young thin male smokers with large bullae in the upper pulmonary lobes. It usually occupies at least one-third of the hemithorax. This case report enables us to recognize this disorder that initially can be mistaken as a pneumothorax.

Case Description: A 50-year-old man presented to the clinic with right sided abdominal pain and shortness of breath with minimal exertion. His past medical history included alcoholic hepatitis and COPD. He had a 30-pack-year history of tobacco use. His vital signs were stable but had greatly diminished breath sounds over the right lung. Chest X-ray revealed a large lucency in the right hemithorax with collapse of the residual lung suspicious for pneumothorax or a large bulla. As patient was relatively asymptomatic, CT-thorax was done which confirmed multiple large bullae in the right lung. Hepatitis panel was positive for Hepatitis A IgM antibody. Alpha-1 antitrypsin level was elevated at 203. A diagnosis of bullous emphysema was made and a right-sided bullectomy was recommended after he recovered from Hepatitis A infection. Smoking cessation was encouraged. He was also advised to follow up as an outpatient and obtain pulmonary function tests.

Discussion: This case illustrates that giant bullous emphysema in a relatively asymptomatic patient can be mistaken for pneumothorax on chest X-ray alone. High-resolution CT is helpful in confirming the diagnosis of Vanishing Lung Syndrome, assessing the extent of disease, and suggesting treatment modalities, such as suitability for lung volume reduction surgery.

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Poster Presentation No. 79

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The Importance of Clinical Diagnosis of Symptomatic Hypocalcemia

Introduction: Hypocalcemia is a serious, sometimes overlooked diagnosis due to the broad range of presentations it can often have; it usually presents with another electrolyte abnormality. This is a case of symptomatic hypocalcemia with superimposed hypomagnesemia, resulting in contractures of both upper and lower extremities.

Case Description: A 66 years old female presented to the ED for a day history of bilateral lower extremity weakness with upper extremity cramps. She stated she was weak and unable to walk, stand or perform any of her activities of daily living. Upon admission, her Calcium was found to be 5.6, with a corrected for Albumin 6.0. Her magnesium was 1.1. Her EKG revealed SVT, likely secondary to her electrolyte abnormalities, which spontaneously resolved. Throughout her stay, she was repleted with multiple doses of both IV Calcium gluconate and PO Calcium carbonate/Calcitriol, as well as IV and PO Magnesium sulfate/oxide, respectively. Her calcium deficiency's etiology was thought to be multifactorial, as she had a PTH of 42 (normal range) as well as gastrointestinal (GI) losses. Her Magnesium losses were revealed to be secondary to GI and renal loss, with suspected Gittelman syndrome. She was discharged home medically stable after a 10 day hospital stay, with supplemental Calcium and Magnesium.

Conclusions: Hypocalcemia varies from an asymptomatic biochemical abnormality to a life threatening disorder, depending on duration, severity, and rapidity of development. It is imperative that therapy be started immediately if there is an acute onset of symptoms such as this case.

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Poster Presentation No. 80

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Success of Antibiotic Therapy in the Management of Clostridium Difficile Infections

Background: Clostridium difficile (Cdif) is an important cause of death due to infectious disease. Cdif infections are primarily treated with antibiotics: Metronidazole and Vancomycin, which have variable success and chances of recurrence. Fecal Microbiota Transplantation (FMT) attempts to reverse the inciting event- alteration of gut flora- that initiates the cycle leading to Cdif infection and recurrence.

Methods: We performed a retrospective chart review to assess the past two years' Cdif infections in our institution and compare the success rates of different treatments. Descriptive statistics analyses were performed using SPSS version 22.

Results: There were 194 patients (55% females) included in the analysis with an average age of 59; 22% were referred from a nursing home. In regards to risk factors for CDif infection, 51% received Proton Pump Inhibitors, 57% antibiotic therapy and 63% were hospitalized prior to the index CDif hospital admission. For 75% patients this was the first CDif episode, with 18% having a second. The average duration of treatment was 14 days. 55% of patients received Metronidazole, 19% Vancomycin and 18% both Metronidazole and Vancomycin. One patient received FMT. 79% patients recovered, 7% died and the rest suffered complications. Patients who recovered were more likely to receive Metronidazole and have a first episode of CDif infection.

Discussion: The results of this study provides data on the relative success rates of different treatments. The future risk factors analysis will help in assessing the superiority of any one treatment, and will guide formulation of institution-wide management protocols

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 81

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Optimizing the Management of Community Acquired Pneumonia - A CQI/EBM Initiative

Background: The prevalence of Community Acquired Pneumonia (CAP) is 5.6 million of patients annually. The goal of this CAP CQI/EBM initiative was to optimize management of CAP and to ensure compliance with core measures and hospital guidelines.

Methods: We conducted chart reviews of patients hospitalized with a main diagnosis of CAP in our institution. Consecutively, we developed educational interventions and protocols targeting our healthcare staff using Plan-Do-Study-Act (PDSA) cycles. For our descriptive statistics analyses we used Statistical Package for Social Science (SPSS) Version 22.

Results: A total of 143 patients (56 post-interventions) were included in the study. Post-interventions, chest X-ray was obtained in 97%, blood cultures in 89%, Streptococcus and Legionella antigen testing in 63%, and sputum culture in 47% of cases. The initial antibiotic regimen was compliant with hospital guidelines in 84% with an average of 4 days of intravenous antibiotics before conversion to oral medication. Moxifloxacin was the most common discharge antibiotic at 21%. Duration of antibiotic therapy inpatient was 8 days with an average of 6 days spent in the hospital. Seven patients were readmitted within 30 days, 2 related to CAP, with no diagnosis of Clostridium difficile.

Conclusions: Overall the compliance with CAP treatment in our institution was high. However, approximately 16% of charts were not compliant with the current guidelines regarding antibiotic regimen, therefore we are planning to continue our stewardship intervention. An area of specific concern is the duration of therapy being just under 9 days despite the target duration between 5-7 days.

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Poster Presentation No. 82

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Reactivation of Resolved HBV Infection: a Potential Fatal Complication of Direct Acting Antiviral Therapy

INTRODUCTION Hepatitis B virus (HBV) reactivation is an abrupt increase in serum HBV DNA in chronic or resolved infection. Patients who require immunosuppression treatment for diseases like malignancies and autoimmune disorders, or to prevent complications after organ transplantation, have an increased risk of HBV reactivation. In addition, treatment using the highly effective direct acting antivirals (DAAs) therapies for treatment of chronic hepatitis C (CHC) infection has a known risk of HBV reactivation. Regardless of the cause, HBV reactivation may result in fulminant hepatic failure.

CASE DESCRIPTION A 60-years old female with myelodysplastic syndrome, CHC infection, and previous HBV infection (negative HBsAg/HBeAg/HBV DNA, positive HBsAb/HBcAb) was admitted, and received stem cell transplant and immunosuppressant therapies. Few months later, treatment with DAAs Elbasvir/grazoprevir was initiated and patient developed nausea, vomiting, abdominal pain and jaundice. Evaluation revealed ALT 510 units/liter AST 430 units/liter, total bilirubin 5.8 mg/dL, INR 1.7, albumin of 2.3g/dL, HBV DNA PCR 39,590IU /ML, reappearance of HBsAg and HBeAg, and disappearance of HBsAb. Treatment of reactivated HBV infection using Entecavir resulted in improvement of symptoms and liver function.

DISCUSSION This case demonstrates reactivation of resolved HBV infection and acute hepatic failure. The risk of HBV reactivation is significantly higher in HBsAb–negative patients, and serological reappearance of HBsAg is the most important predictor of HBV-related hepatitis flare. Even without serologic confirmation of HBV reactivation, immunosuppressed patients may benefit from early start of antiviral therapy. In the context of profound immunosuppression, clinicians should remain vigilant when treating CHC infection with DAAs.

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Poster Presentation No. 83

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Recurrent Hospitalizations in a Rare Case of Hemicorporectomy: A Challenging Case for Medical Management

Introduction: Hemicorporectomy, or translumbar amputation, is a radical surgery involving the dissection of the body at the waist (between L4-L5) and is usually reserved for complex medical conditions including locally invasive malignancy and terminal pelvic osteomyelitis. A total of 71 cases have been reported. We present a 22-year follow up in a rare case of hemicorporectomy involving recurrent hospitalizations secondary to chronic advanced pressure ulcers and complicated urinary tract infections (UTIs).

Case Description: A 53-year-old male underwent a hemicorporectomy after a series of surgical procedures for recurrent pressure ulcers, UTIs and osteomyelitis, which occurred after he suffered a gunshot wound causing paraplegia at age 31. Unfortunately, these infections persisted post-hemicorporectomy and the patient continued to develop advanced pressure ulcers on his back and inferior aspect of his body. Despite repeated courses of broad-spectrum intravenous antibiotics and surgical debridements of his chronic advanced pressure ulcers, this patient suffered recurrent bouts of sepsis. In light of the fact that this patient had been admitted to the hospital on average 10 times/year, the patient's family chose to manage his condition conservatively with home hospice, with a focus on comfort care.

Discussion: This case illustrates the significant challenges in the medical and surgical management of hemicorporectomy patients, which can lead to recurrent hospitalizations with a diminished quality of life and a poor prognosis for patients. We hope that this case may help healthcare providers anticipate and manage some of the potential complications in similar patients who have undergone hemicorporectomy or other radical surgical procedures.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 84

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Suspected Alport Syndrome in a Middle-Aged Male with Newly Diagnosed Advanced Renal Failure

Introduction: Alport Syndrome is an inherited disease classically characterized by hematuria, sensorineural deafness, and lenticonus. Renal Failure is often seen as sequelae in late adolescence of affected males. Alport Syndrome's prevalence is 1 in 50,000 live births, while accounting for 0.3-2.3% of new End-Stage Renal Disease (ESRD) cases. Here we present a case of Alport Syndrome presenting in a middle-age male.

Case Description: A 53 year-old gentleman, new patient, presented with the complaint of intractable nausea, and found to have new onset renal failure. Initial history was obtained through a written dialogue. Once the language barrier was addressed, the patient revealed a history of early childhood hematuria and rapidly progressive deafness, progressive blurred vision, and a family history consistent with deafness and presumptive renal failure. Laboratory evaluation showed a significantly elevated creatinine, anion-gap metabolic acidosis, uremia, dyselectrolytemia, hematuria and nephritic range proteinuria. He was initiated on hemodialysis for refractory metabolic acidosis and significant uremia. Further investigation was without evidence of recent nephrotoxic agents, infectious etiology, vasculitis or obvious autoimmune condition. Consequently, there was a high clinical suspicion for Alport Syndrome.

Conclusions: Our case is an example of a patient who exhibited the classical symptoms of Alport Syndrome, with the onset of advanced renal failure presenting in the 5th decade of life. Secondary to deafness and progression into legal blindness, he had significant language barriers and poor follow-up. Renal biopsy was anticipated for confirmation, meanwhile proceeding with regularly scheduled hemodialysis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 85

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Role of the Biologic Therapy in the Treatment of Psoriasis

Introduction: Emerging evidence over the last decade has supported the use of biologic therapy in the treatment of psoriasis, an autoimmune chronic skin disease.

Methods: We conducted an evidence-based review by performing a PubMed and Cochrane databases search for systematic reviews/meta-analyses and randomized controlled trials (RCTs) of biological treatments for moderate to severe psoriasis. The used keywords were “newer treatments for psoriasis”, or “biological agents for psoriasis”, and all relevant studies were critically appraised.

Results: A recent meta-analysis included 45 studies of patients with moderate to severe psoriasis. The results showed that all biological medications had similar efficacy when compared to Methotrexate/Placebo at 3-4 months. A cluster analysis that compared Secukinumab, Adalimumab and Ustekinumab showed these agents were similar in terms of efficacy and tolerability. It also proved further that Ixekizumab and Infliximab were highly efficacious but patients had problems in tolerating these drugs. Another meta-analysis of 38 RCTs determined that the anti IL-17 drugs like Ixekizumab, Secukinumab and Brodalumab have an equal or higher likelihood of patients achieving a 75% improvement on Psoriasis Area and Severity Index (PASI), with an overall pooled effect favoring biological agents and small molecule inhibitors over Placebo.

Conclusions: Overall, in the treatment of moderate to severe psoriasis, biological agents were more efficacious than Placebo and Methotrexate in achieving PASI scores of 75 to 90. Future studies should look at long-term outcomes given that psoriasis is a chronic condition and most of the RCTs looked at symptom improvement in a 12-16 week time frame.

Poster Presentation No. 86

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Post-Partum Spontaneous Coronary Artery Dissection

Introduction: Spontaneous coronary artery dissection is a rare cause of acute myocardial infarction and it often affects young women without any coronary risk factors.

Case Description: A 32-year-old healthy female recently delivered a baby uneventfully. On post partum day 9, she developed acute chest pain and extremity edema. She went to a local hospital and was found to have elevated blood pressure and mildly elevated troponin I (0.23 ng/mL). Left heart catheterization (LHC) was performed showing no coronary artery blockage. She was discharged with Aspirin, Atorvastatin, Beta blocker and ACE inhibitor. Her edema improved, however, the chest pain worsened. She presented to our hospital on postpartum day 12 due to severe chest pain radiating to her back, with associated diaphoresis and shortness of breath. She had elevated troponin I from 1.02->8.53->14.66 (peaked at 32.07 ng/mL). EKG showed inverted T waves in V1-V6. Echocardiogram showed reduced EF of 35-40%, severe hypokinesis in inferior-lateral wall and apex. She received emergent LHC, which revealed extensive dissection in mid to distal left anterior descending and proximal to distal left circumflex coronary arteries. It was not amenable to PCI. She was treated with heparin infusion for 72 hours to maintain the blood supply. Dual Antiplatelet Therapy were also added.

Conclusions: Postpartum coronary artery dissection is an important cause of acute myocardial infarction in a young female. A conservative medical management has been recommended as the initial approach. However, in patients with ongoing or refractory ischemia, revascularization will be needed.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 87

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Between a Rock and a Hard Place: Anticoagulation in Patients with Atrial Fibrillation and Infective Endocarditis

Atrial fibrillation is a common etiology of stroke in patients above the age of 65. Anticoagulation is recommended in high risk patients with atrial fibrillation to prevent stroke. However, coexisting infective endocarditis creates a therapeutic conundrum. Infective endocarditis poses an increased risk for intracranial bleeding due to mycotic aneurysms. This case presents a patient with atrial Fibrillation and Infective endocarditis complicated with septic emboli to the brain.

A 71-year-old male came in for management of acute CHF and cellulitis of the lower extremity. He initially received lasix and Rocephin. He was placed on a heparin drip for paroxysmal Afib. Initial TEE and CT head were negative. Blood cultures were positive for Strep Agalactiae. Despite presumed appropriate therapy, patient declined.

Repeat TEE showed large vegetations on his native heart valve. CT head showed new septic emboli to his brain. Heparin was immediately stopped. The patient further decompensated a day prior to mitral valve repair to reduce the burden of vegetation, and ultimately required intubation due to worsening mental status. Repeat imaging showed new areas of strokes.

Over the last decade, the debate in medicine has remained controversial as to whether to anticoagulate patients with atrial fibrillation and concurrent infective endocarditis. Studies to this effect have been limited. More studies need to be done as to what is beneficial in improving overall morbidity and mortality, so that someday, we would hopefully come up with a definitive management of such patients with regards to anticoagulation.

Poster Presentation No. 88

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Treatment of Refractory Adult Onset Hemophagocytic Lymphohistiocytosis

Hemophagocytic lymphohistiocytosis (HLH) is a rare clinical syndrome caused by a hyperinflammatory state most often triggered by an infectious insult, aggressive malignancy, or autoimmune condition. Excessive levels of cytokines from activated macrophages and lymphocytes lead to the characteristic clinical presentation of persistent fever, hepatosplenomegaly, and cytopenias. HLH affects all ages but current treatment guidelines are based upon the pediatric population.

A 60-year-old male presented with a six month history of intermittent fevers and weight loss. Exam revealed lethargy, splenomegaly, and pancytopenia. CT guided bone marrow biopsy revealed HLH and rare Epstein-Barr virus positive cells. Further laboratory studies were positive for 5 of the 8 diagnostic criteria for HLH. Initial treatment included dexamethasone and intravenous immunoglobulin (IVIG) therapy. After clinical improvement, patient was discharged with plans for stem cell transplant evaluation. Prior to evaluation, he was re-hospitalized for recurrent fevers and etoposide therapy was initiated. He then developed diffuse alveolar hemorrhage and bilateral chest infiltrates requiring invasive ventilation. All therapies were discontinued due to treatment failure and progressive clinical decline.

HLH is a rare syndrome that represents both a diagnostic and treatment challenge. Well studied chemotherapy and stem cell transplant protocols exist for pediatric patients, but no studies exist on therapies for adults. Our patient initially responded to a novel combination treatment of corticosteroids and IVIG but due to treatment refractoriness, he required etoposide therapy that ended with a poor outcome. Our case emphasizes the challenges associated with treatment of adult onset HLH and the need for additional clinical data.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 89

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Atypical Hemolytic Uremic Syndrome Secondary to Dermatomyositis

Back Ground:

Atypical hemolytic uremic syndrome is a rare disorder of the complement system , characterized by hemolytic anemia, thrombocytopenia and renal failure that is not associated with ADAMTS13 Deficiency or infectious diarrhea.

Case:

We report the case of a 60 year-old woman with history of COPD and recently diagnosed dermatomyositis who presented with nausea, vomiting and abdominal pain for 2 days. At presentation, she had non- immune hemolytic anemia, thrombocytopenia and acute renal failure. She denied having any diarrhea or symptoms of respiratory tract infections. With the initial working diagnosis of thrombotic microangiopathy, patient began plasmapheresis. She experienced improvement in platelet count and LDH levels with plasmapheresis but had worsening renal function so intermittent hemodialysis was commenced. Biopsy of the kidney was planned but could not be obtained due to significant thinning of the renal cortices. Stool Shiga toxin and comprehensive workup for secondary causes of HUS was negative. ADAMTS13 was normal. She was found to have hypo-complementemia with low C3 and normal C4 levels. Eculizumab therapy was initiated for atypical HUS with good response.

Discussion:

Atypical HUS has been associated with viral infections, organ transplantation, pregnancy, SLE, antiphospholipid syndrome and certain drugs but there have been no prior reports of atypical HUS secondary to dermatomyositis . This case highlights the fact that timely diagnosis of atypical HUS can lead to early initiation of eculizumab therapy which has been shown to have improved renal function and quality of life for these patients .

Poster Presentation No. 90

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Heart Break by a Tumor

Takotsubo's cardiomyopathy accounts for 1-2% of patients presenting with troponin-positive acute coronary syndrome. Proposed mechanisms include catecholamine excess, coronary artery spasm, and microvascular dysfunction. Here we present a case of a 45 year-old female with past medical history of hypertension, dyslipidemia, and restless legs syndrome that presented with chief concern of acute onset of sharp chest pain with radiation to the back of her head. At work, she was noted to have systolic blood pressure above 200. Over the course of the months prior to admission, patient had been experiencing episodes of diaphoresis lasting 5-10 minutes without symptoms of anxiety or panic. One month prior to admission, an emergency department visit for abdominal pain was notable for abdominal CT showing left sided ovarian cyst and adrenal nodule of 2.3 cm. On evaluation, physical exam revealed tachycardia and blood pressure 222/118. Patient had leukocytosis of 32,000, troponin 0.215, EKG noting sinus tachycardia. CT abdomen confirmed aforementioned finding. Echocardiogram noted ejection fraction of 45%, nearly akinetic distal left ventricle, and moderate-to-severe hypokinesis of basal one-half inferior wall. Next day left heart catheterization noted improved ejection fraction of 70% with near resolution wall motion abnormalities. Subsequent outpatient follow-up with endocrinology resulted in elevated serum metanephrines, normetanephrines. MRI could not confirm pheochromocytoma. Patient had left adrenalectomy with biopsy confirmed 1.5cm pheochromocytoma. Given that incidence pheochromocytoma is 2-8 per 1,000,000 persons, this case is an illustration of takotsubo's cardiomyopathy in a rare form of catecholamine excess state.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 91

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Program Director: Talwnda Bragg, MD, FACP

Inclusion Body Myositis in a Patient with Long-Standing Rheumatoid Arthritis

Introduction: Inclusion body myositis (IBM) is an inflammatory myopathy that very rarely develops in patients with preexisting rheumatoid arthritis (RA). Currently, there is no known effective management of IBM in this setting.

Case: We present the case of a 77-year-old man with long-standing rheumatoid arthritis. The patient's disease was adequately controlled with infliximab alone for about 9 years, when he presented to his rheumatologist with bilateral quadriceps weakness. Creatine kinase was elevated. The weakness persisted even after discontinuing atorvastatin. Empiric prednisone was started, and a quadriceps muscle biopsy was obtained. This showed myocytes containing rimmed vacuoles, congophilic inclusions and an auto-aggressive inflammatory infiltrate consistent with sporadic inclusion body myositis.

Discussion: Inclusion body myositis, a rare inflammatory myopathy affecting elderly patients, develops even rarely in the setting of rheumatoid arthritis. Only a handful of cases have been reported. Current treatment options for IBM help optimize muscle function without a clear disease-modifying effect. Methotrexate, prednisone, IVIG, anti-T-lymphocyte globulin and alemtuzumab are typically used based on limited data. Although some of the previous case reports suggested deleterious effects of anti-TNF- α therapy and lack of sustained benefit of glucocorticoids in IBM with concomitant RA, our patient's myopathy seemed to improve with prednisone. Moreover, he continued to tolerate infliximab for rheumatoid arthritis without any noticeable impact on the course of IBM.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 92

Presenter: Rachel Abouzaid

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Institution: St. John Hospital and Medical Center - Grosse Pointe

Program Director: Raymond Hilu, MD, FACP

A Case of Boerhaave Syndrome Due to Intractable Nausea and Vomiting

Introduction:

Esophageal perforation, also known as Boerhaave Syndrome, is caused by an increase in intra-esophageal pressure and negative intrathoracic pressure, often as a result of severe retching or coughing. This condition is associated with high levels of morbidity and mortality and must be recognized quickly.

Case:

A 29-year-old male with no significant past medical history presented with a 2 day history of intractable nausea and vomiting after a weekend of heavy alcohol consumption. The patient was tachypenic, tachycardic, and appeared in significant distress, curled over and drooling at the mouth. His vomitus was black with streaks of blood. His labs were only significant for leukocytosis and ketosis in the urinalysis. Chest X-ray was not obtained in the ED, however given his difficulty swallowing and distress, it was ordered and revealed a pneumo-mediastinum along the left heart border. The patient was intubated, started on broad spectrum antibiotics, and proton pump inhibitors. He underwent emergent EGD with stent placement. The course was successful and the stent was removed one week later.

Conclusion:

In our case, the patient did not present with the classic symptom of retrosternal chest pain, however, due to his dysphagia and epigastric pain, a chest x-ray was warranted and proved to be key in initiating lifesaving intervention. Although the majority of esophageal perforations are iatrogenic, there should be a high index of suspicion in patients presenting with vomiting or coughing, who presents with dysphagia and severe distress.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 93

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Program Director: Raymond Hilu, MD, FACP

Incidental Metastatic Melanoma in a Patient with Abdominal Pain Due to Trauma

Melanoma is the most serious form of skin cancer. The prognosis of patients diagnosed with advanced stages of melanoma is dismal. Patients with metastatic melanoma sometimes present with no overt complaints, and are diagnosed incidentally.

A 34 year old male presented with abdominal pain. He reported that he works at a factory with heavy machinery and got pinched in-between two machines. After the incident patient noticed he had a diffuse bruise on his abdomen which was painful. Over the course of the next few days the bruise started to recede and the pain improved significantly. Patient on presentation had no significant complaints apart from some pain in the abdomen. Review of systems was significant for a mole on his back, that had been growing in size, and easily bleeds on scratching. Patient denied any constitutional symptoms. Exam revealed a fair red headed obese male with multiple nevi on the back, and what appeared to be a skin tag that was black in color. At the root of this lesion, the borders were irregular. CT abdomen, done to exclude other etiologies of abdominal pain due to trauma, revealed multiple lytic lesions of the lumbar vertebrae. Biopsy showed poorly differentiated melanoma. The patient did report history of frequent sun exposure and easy sunburn as a child.

This case underscores the importance of skin exam and the evaluation of any suspicious lesions. Detection at an early stage as a result of early detections correlates with improved survival.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 94

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Migraine Headache as Initial Presentation of Cerebral Venous Sinus Thrombosis

Cerebral Sinus Thrombosis (CVT) is a rare condition, and one of the least common causes of stroke. Woman to man ratio is 3:1. Pro-thrombotic conditions consider as one of the most common risk factors. CVT Diagnosis is challenging as its presentation varies according to the site and number of the sinuses and veins involved, with a headache considered as the most frequent presentation and usually misdiagnosed as a migraine, it might also be associated with visual change and seizure.

Case report: A 19 years old female with a past medical history of a migraine who presented with recent multiple attacks of a headache, which had been diagnosed as a migraine headache. During her last attack, the patient was given standard pain medication and her pain improved thereafter the patient developed a generalized seizure. CT scan pointed toward either mass or ischemia. CTA of the brain showed deep venous thrombosis of the sagittal sinus with ischemic venous infarction involving the right frontal-parietal portion of the brain. MRA showed Deep venous thrombosis of the sagittal sinus and left transverse sinus and straight sinus. The patient underwent IR Cerebral angiogram with mechanical thrombectomy which showed extensive intracranial venous sinus and cortical vein thrombosis with significant venous outflow congestion identified over both hemispheres. Flow improved post-mechanical thrombectomy. Her medical condition improved gradually over time.

Conclusion: we are highlighting the under-diagnosed picture for CVT and suggesting that it should be included in the differential diagnosis of a recurrent headache with complex migraine picture.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 95

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Scrotal Necrosis Mimicking Fournier's After HIPEC

Introduction

Hyperthermic intraperitoneal chemotherapy (HIPEC) represents an advancement in chemotherapy by applying heated chemotherapy directly into the abdomen after tumor debulking surgery. We describe the case of a rare complication associated with HIPEC: epidermal ulceration and necrosis of the scrotal wall.

Case Report:

A 47-year-old man with metastatic appendiceal carcinoma presented to the hospital with a ten-day history of scrotal pain and swelling. Four months ago, the patient underwent tumor debulking and HIPEC. The patient denied fever and had a normal complete blood count. Scrotal ultrasound showed bilateral varicocele and hydrocele and the patient was discharged home on cephalexin. The patient returned two days later with increasing pain. Physical examination revealed serpiginous, irregular necrotic skin of the scrotum with no edema or erythema. A CT of the abdomen and pelvis showed scrotal wall edema and some fluid collection in the right lower abdominal wall. His white blood cell count was normal. Debridement of the necrotic tissue revealed epidermal ulceration with necrosis of underlying tissues and obliterative vasculitis with inflammatory features suggestive of Fournier's gangrene. Special stains were not significant and all cultures were ultimately negative.

Discussion:

HIPEC therapy is a relatively new treatment modality with commonly reported surgical complications including bowel perforation, bleeding, fistula formation, bile leakage, pancreatitis, and sepsis. Genital ulceration has been reported, but as a very rare complication of HIPEC. Sequestration from the abdomen via the processus vaginalis is one proposed mechanism. Early recognition and appropriate management is important in this rare complication.

Poster Presentation No. 96

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Spontaneous Coronary Artery Dissection in Multiple Gestation Peripartum Period

Non-atherosclerotic spontaneous coronary artery dissection (SCAD) is defined as a non-traumatic and non-iatrogenic separation of the coronary arterial wall. SCAD is a highly uncommon cause of myocardial infarction (0.1 to 0.4 %).

40 year-old African American women, G1T1P0A0L2, with past medical history of tobacco abuse and obesity who had uncomplicated cesarean section delivery for healthy twins two weeks prior presented with substernal, sudden onset chest pain. The pain radiated to left arm and back, and it was pressure-like in nature.

She had normal vital signs upon presentation. Physical examination was benign except for well-healed C-section wound.

Electrocardiogram showed normal sinus rhythm with nonspecific ST abnormality. First set of troponins was less than 0.03, second set showed troponins 0.18 and D-dimer 2340. Chest x-ray was unremarkable. Echocardiogram showed only mild to moderate mitral valve regurgitation. CT angiography of the chest showed no evidence of pulmonary embolism. She was started on heparin drip and catheterization next day showed no atherosclerotic coronary artery disease, but SCAD of inferior diagonal first branch. No intervention was done, heparin was stopped. Patient was started on aspirin, statin, Clopidogrel, Metoprolol and Lisinopril per cardiology recommendation.

In most SCAD patients, conservative therapy is the preferred strategy after the diagnosis is secured. Patients with symptoms of ongoing ischemia or hemodynamic compromise should be considered for revascularization with PCI or coronary artery bypass grafting. Current recommended conservative medical management includes long-term aspirin, beta blocker, and one year of clopidogrel, with the addition of a statin in patients with dyslipidemia.

Poster Presentation No. 97

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Non-Fulminant Hepatitis A with Acute Renal Failure; A Rare Association

Acute hepatitis A (HAV) is usually self-limiting benign disease. Extrahepatic manifestations of viral hepatitis included arthritis, vasculitis, cryoglobulinemia and acute renal failure commonly associated with Hepatitis B and C. We present a rare case of non-fulminant HAV leading to acute renal failure.

Case: 35-year old male presented with fever, jaundice, abdominal pain, diarrhea and dark urine. Physical examination was remarkable for scleral icterus, right upper quadrant tenderness without hepatomegaly. Initial workup demonstrated a creatinine 13 mg/dL, AST 1936, ALT 3558 with a total bilirubin of 13.3 mg/dl and a positive hepatitis A IgM. Treated supportively with hydration for acute kidney injury. He subsequently became oliguric without improvement of renal functions. Urinalysis demonstrated large proteinuria and blood with 11 RBCs without eosinophilia. Urine microscopy showed numerous RBCs without casts. Renal ultrasound was unremarkable. An immune-mediated renal injury was suspected prompting to obtain complement levels which were significantly reduced. ANA, CANCA, PANCA and Cryoglobulin were negative. Nephrology recommended aggressive diuresis and deferred biopsy. Creatinine slowly trended down with improved urine output without dialysis. The patient was discharged with normal liver function.

Discussion: The etiology of HAV-associated renal failure exists as an amalgamation of direct toxin, ischemic and immune-complex mediated injury. The first case of non-fulminant hepatitis A causing acute renal failure was published in 1978, 60 cases have been reported since. Given the current Michigan outbreak, internists need to be aware of extrahepatic manifestations of HAV infection including acute renal failure.

Poster Presentation No. 98

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Recurrent Thrombotic Microangiopathy Due to Hypertensive Emergency

Introduction: Thrombotic microangiopathy (TMA) is a clinical syndrome characterized by microangiopathic hemolytic anemia, thrombocytopenia and organ injury. Etiologies of TMA include thrombotic thrombocytopenia purpura (TTP), hemolytic uremic syndrome, malignancy, drugs and severe hypertension. The threshold of blood pressure leading to TMA remains unknown; however, TMA occurs more frequently when systolic and/or diastolic blood pressures exceed 200 mmHg and 100 mm Hg, respectively.

Case Report: A 26-year-old male presented to the emergency room with abdominal pain, nausea, and vomiting for four days. His medical history was significant for hypertension and end-stage renal disease managed with hemodialysis. The patient had been noncompliant with anti-hypertensive medications. Upon arrival, his blood pressure was 231/123 mmHg and laboratory investigations revealed WBC 10,300/mm³, hemoglobin 7.8 gm/dL, platelet count 46,000/mm³, reticulocyte count 7.8%, total bilirubin 1 mg/dl, LDH 1,235 IU/L, and haptoglobin <10 mg/dL. Direct Coomb's test was negative. Numerous schistocytes were identified on peripheral smear. The patient was diagnosed with TMA secondary to severe hypertension and was started on intravenous nicardipine. With appropriate blood pressure control, hematologic parameters improved within 10 days. Of note, the patient had two other similar episodes of hypertension-induced TMA within a three month period.

Discussion: The initial clinical presentation of hypertension-induced TMA is indistinguishable from TTP-induced TMA, except for the presence of severe hypertension. A history of hypertension, significant renal impairment, relatively modest thrombocytopenia, and lack of severe ADAMTS-13 deficiency, serve as useful clues for diagnosis of hypertension-induced TMA.

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Poster Presentation No. 99

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A Case of Desmoplastic Small Round Cell Tumor

Desmoplastic small round cell tumor (DSCRT) is a rare and highly malignant mesenchymal tumor that predominantly affects young males with peak incidence at ages 25-29 years. We report a case of a 39-year-old African-American man who presented with chief complaints of urinary retention and weak stream for one month. A computed tomography (CT) scan of the abdomen and pelvis revealed 11.3 x 9.7 x 12.5 centimeter pelvic mass compressing the bladder and rectum. Histologic studies revealed nests of cells separated by thick bands of desmoplastic stroma. Cells were positive for cytokeratin AE1/AE3, desmin, CD99 and neuron specific enolase. Diagnosis was confirmed with positive t(11;22)(p13;q12). The patient was initiated on induction chemotherapy: Vincristine, Doxorubicin and Cyclophosphamide alternating with Ifosfamide, Etoposide and Vincristine. A follow-up CT revealed partial response with reduction in the size of the pelvic mass and smaller external iliac lymph nodes with clinical improvement of his symptoms. A study that assessed 28% of the U.S. population from diverse geographic regions showed that DSCRT was predominantly more prevalent in African-American males. In addition to its unique epidemiologic distribution, DSRCT is a mesenchymal tumor characterized by the distinctive chromosomal translocation t(11;22)(p13;q12). DSRCT can also be associated with elevated cancer antigen 125. Treatment options are limited and the five-year survival rate ranges between 15-33%. Alkylator-based therapy utilizing the P6 regimen has been the cornerstone of initial treatment. Recently, reports of molecular-targeted drugs like Pazopanib and Sunitinib have been shown to have anti-DSRCT activities. Surgical debulking followed by radiotherapy has shown improved survival.

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Poster Presentation No. 100

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When Statins Strike Back: A Rare Case of Statin-Associated Autoimmune Myopathy

Statins are used daily in the primary and secondary prevention of cardiovascular disease. Statin-associated autoimmune myopathy (SAM) is a rare side effect of statin use attributed to a discrete autoimmune entity within the statin induced myopathy spectrum.

70-year-old male with a history of hyperlipidemia presented with proximal muscle weakness and myalgias after viral illness 8 weeks prior. Outpatient workup revealed transaminitis and medium intensity statin therapy was discontinued without improvement. Initial exam revealed 3/5 strength in proximal muscles, tenderness to palpation, preserved neurologic function without dermatologic findings. Laboratory analysis revealed persistent transaminitis, elevated CPK greater than 16,000 and myoglobinuria. Treatment with IV fluids for presumptive diagnosis of statin induced rhabdomyolysis was initiated. His symptoms progressed to dysphagia requiring mechanical feeding. Persistently elevated CPK with negative inflammatory myopathy workup prompted us to obtain HMG CoA reductase antibody leading to the diagnosis of SAM. Muscle biopsy was obtained which showed necrotic fibers varying in size with foci of mild endomysial inflammation with increased capillary staining for membrane attack complex, no other features of dermatomyositis were present confirming the diagnosis. The patient was treated with steroids, IVIG, azathioprine and inpatient rehabilitation with significant improvement.

Despite an incidence of approximately 1 in 100,000, SAM must be considered in patients presenting with a clinical picture consistent with statin induced rhabdomyolysis especially if symptoms persist despite stopping the statin. This autoimmune phenomenon must be diagnosed and treated promptly with immunosuppression otherwise it can be self-perpetuated resulting in progressive significant debility.

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Poster Presentation No. 101

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Aortic Dissection with Negative CTA

Introduction: Aortic dissection is a major medical problem with high mortality rate. Typical presentation is sudden onset of chest pain. CTA, MRI and TEE are the imaging modalities for aortic dissection when suspected. We present a case of type A aortic dissection with negative initial CTA, but positive CTA repeat after several hours.

Case presentation: Patient is 33 years old female, who presented with chest pain for 3 days. It was stabbing in nature, 7/10, and with radiation to her back. She was hypertensive with BP 203/126 which improved after restarting her home medications. Her troponin was 0.39 and decreased to 0.35, with no new ischemic changes on EKG. Patient underwent CTA with indication as "rule out Pulmonary Embolism", and it showed aortic aneurism (6.4 X 5.7 cm) with no contrast extravasation, and no PE. Upon her arrival to the floor, her nurse called RRT for chest pain and she underwent another CTA with indication to rule out aortic dissection and this revealed ascending thoracic aortic dissection. She was started on Esmolol drip, and then air lifted to University of Michigan for surgical intervention.

Discussion: Aortic dissection is life threatening medical emergency. It's extremely important to identify these patients, obtain the appropriate imaging and intervene on timely manner. We receive minimal medical teaching about CTA types. It is important in our case to have the imaging with contrast in aorta, rather than pulmonary veins to evaluate for dissection. Teaching medical providers about this might prevent serious adverse outcomes.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 102

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Negative Heparin-Induced Thrombocytopenia Antibodies Assays in Patient with High Probability for HIT

Objective: Diagnosis of heparin-induced thrombocytopenia (HIT) requires both clinical and laboratory components. The 4T system is clinical probability scoring system which predicts the likelihood of HIT. Laboratory evaluation for HIT includes immunological testing with HIT antibodies assays which are sensitive in >95% of cases and used to rule out HIT. The second laboratory test is the functional tests which include heparin-induced platelet activation assay (HIPA) and the serotonin release assay (SRA) which is considered the gold standard with specificity and sensitivity >95%. Although the HIT antibodies assays are used to rule out HIT, -ve results with high probability for HIT should prompt for further testing with the serotonin release assays or heparin-induced platelet activation assay.

Method: We present a case in which a patient presented with massive thromboembolism of the aorta, left mesenteric and popliteal arteries who underwent thrombectomy and angioplasty followed by re-thrombosis secondary to HIT in which HIT antibodies assays were negative but SRA was positive.

Results: HIT antibodies assays were -ve but SRA assay was +ve in patient with high probability for HIT.

Conclusion: Immunological HIT antibodies assays are +ve in >95% of cases and are used to rule out HIT. -ve test with high probability for HIT should prompt the physician for further testing with the functional tests which include SRA and HIPA assay to confirm the diagnosis.

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Poster Presentation No. 103

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Unique Case of TTP with Unusual Severe Anemia

Introduction

TTP is a type of thrombotic microangiopathy. Patients usually present with mild hemolytic anemia and multiorgan failure. The average hemoglobin on presentation was 8.7 gm/dL in United Kingdom registry. We present a case of acute TTP with unusual severe anemia, hemoglobin of 4 gm/dL, which increased to 13.1 gm/dL with appropriate management. Although it is atypical for TTP to present with such low hemoglobin, in such cases early initiation of plasma exchange is life saving.

Case

A 54-year-old female presented with two-weeks history of fatigue, generalized weakness, and jaundice. Physical exam revealed depressed mentation, severe pallor, jaundice, and multiple petechiae. There was no lymphadenopathy or hepatosplenomegaly. Guaiac exam was negative.

Initial blood work revealed hemoglobin of 4 gm/dL with normal MCV, reticulocyte 14%, LDH >1800 IU/L, platelets of 15,000/mm³, creatinine of 1.1 mg/dL, and bilirubin of 7.9 mg/dL (mostly indirect). Haptoglobin <10 mg/dL, coagulation studies were normal and Coombs test was negative. Peripheral smear revealed numerous schistocytes and ADAMTS 13 was sent out.

Patient was initiated immediately on plasma exchange and her anemia with all hemolytic parameters continued to improve daily. ADAMTS13 activity came back less than 5% confirming the diagnosis of TTP.

Discussion

TTP is a true medical emergency with high morbidity and mortality. The clinical features of TTP are very non-specific and may vary from case to case. On suspicion, plasma exchange is the mainstay of treatment even with unusual features.

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Poster Presentation No. 104

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Thoracic Perforation of Acute Esophageal Necrosis 2' to Boerhaave Syndrome

Introduction: Boerhaave syndrome (BS) is associated with high morbidity and mortality. An esophageal perforation as a complication of acute esophageal necrosis (AEN) is seen in less than 7% of cases. Perforation from AEN coinciding with BS generally has poor outcomes.

Case: A 29 year old male with PMH of alcohol abuse and recent binge on absinthe and bourbon presented with intractable nausea and hematemesis of one day duration associated with epigastric pain. Exam was significant for tachycardia and epigastric tenderness without rebound. White blood cell count was high (28.9 thousand/ cu mm). Chest x-ray demonstrated pneumomediastinum along the esophageal border. Upper endoscopy revealed circumferential necrotic black mucosa of the mid-distal esophagus with mucosal tears near the EG junction. A self-expanding metal stent (SEMS) was placed and he was transferred to the MICU mechanically ventilated. Treatment was supportive, with IV antibiotics and proton pump inhibitor (PPI). One week later, repeat endoscopy revealed complete resolution. The SEMS was removed and the patient was discharged on PPI.

Discussion: Prolonged vomiting from an alcohol binge is a known cause of AEN, generally without perforation. However, there are only three cases of BS per million per year. Spontaneous, thoracic esophageal perforations, diagnosed within 24 hours carry a mortality rate of 13-36%. Treatment is not well studied given the low incidence and high mortality. While surgical repair is a gold standard, placement of an SEMS is a good option for esophageal perforation in select cases.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 105

Presenter: Abdelkader Chaar

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An Unusual Cause of Micoangiopathic Hemolytic Anemia

Introduction: Microangiopathic hemolytic anemia (MAHA) is an important but rare cause of renal impairment. The most common causes of MAHA are thrombotic thrombocytopenic purpura (TTP), hemolytic uremic syndrome and disseminated intravascular coagulation. We report an unusual case of MAHA induced by malignant hypertension.

Case: A 40-year-old woman with a history of uncontrolled hypertension presented with a two-day history of blurred vision, oliguria, nausea and vomiting. Vital signs revealed blood pressure 300/180 mmHg, heart rate 120 beats/minute, respiratory rate 27 breaths/minute and temperature 98.6°F. Her physical examination was unremarkable except for lethargy. Laboratory evaluation was significant for: hemoglobin 11.3 g/dL, platelets $91 \times 10^9/L$, BUN 103 mg/dL, creatinine 15.95 mg/dL, reticulocyte percentage 5%, lactate dehydrogenase (LDH) 891 U/L and haptoglobin < 10 mg/dL. Peripheral blood smear revealed numerous schistocytes and helmet cells. Given the patient's clinical presentation, severe hypertension-induced MAHA was suspected. She was started on intravenous nicardipine and underwent emergent hemodialysis. Within one week, the patient experienced resolution of symptoms with normalization of platelets, LDH and haptoglobin levels. Kidney biopsy demonstrated morphologic changes suggestive of malignant hypertensive nephropathy. After eight months, the patient remained oliguric requiring hemodialysis.

Conclusion: Severe hypertension-induced MAHA is a rare entity that responds well to antihypertensive therapy. However, in severe cases, permanent kidney dysfunction may be an unavoidable consequence. Treatment decisions should be made after careful exclusion of other potential causes.

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Poster Presentation No. 106

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Human Coronaviruses and Their Clinical Manifestations

Background: Four human Coronaviruses (HCoV-229E, HCoV-HKU1, HCoV-NL63, HCoV-OC43) are associated with an array of respiratory illnesses. There is a lack of literature to determine the seasonal variation and relative importance of the different Coronaviruses.

Methods: We determined the prevalence of Coronavirus infection, co-infecting viruses and seasonal variability, and patient characteristics and clinical presentation. We conducted a retrospective chart review of all patients who tested positive for Coronavirus with multiplex respiratory virus PCR (Cr RVP) from 09/01/2016-07/01/2016. Demographics, the Charlson Weighted Index of Comorbidity (CWIC), clinical characteristics, source of infection, length of stay (LOS), in-hospital mortality, and outcomes were assessed. Data were analyzed using SPSS v. 24.

Results: A total of 82 patients were identified with Cr RVP, 62 were inpatients. Inpatient prevalence of Cr RVP was 0.11% (62/55,277 admissions). Median age was 4 years old (IQR 57.54). Most common identified isolated strain was OC43 (n= 33, 48.5%). Lower respiratory tract infection (LRTI) was the most common presentation (n=43, 52.4%). Pneumonia was the most common LRTI (n= 25, 58.1%). The most common season for infection was winter (n= 65, 85.5%). Mortality was 6.3% (n= 5), the median CWIC score in those who survived was 0 (IQR 0) compared to 5 (IQR 7) in those who died (p=0.02).

Conclusions: The most common strain of Cr RVP was OC43 and was commonly associated with LRTIs. Most patients with LRTI were infected with coronavirus alone. RSV was the most common co-infection, with winter being the predominant season. Higher CWIC was associated with mortality.

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Poster Presentation No. 107

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A Rare Case of Azathioprine Induced- Reversible Myelodysplastic Syndrome

Myelodysplastic Syndrome (MDS) is an irreversible hematopoietic stem cell disorder characterized by dysplastic and ineffective blood cell production and a variable risk of transformation to acute myeloid leukemia (AML). It can occur de novo or after exposure to certain chemotherapy agents, radiotherapy, toxins etc. We present a rare case of azathioprine induced MDS which was reversed after discontinuation of the drug.

59 year-old female who was being treated with Azathioprine for 2 years for Neuromyelitis Optica, presented with low grade fever and fatigue. Physical exam was unremarkable. Labs were significant for white blood count of 1000 cells/mcl, absolute neutrophil count of 300, Hgb of 8.1 g/dl, MCV of 109 fl and platelet count of 109,000. CBC obtained six months prior was normal. Peripheral smear showed Pseudo-Pelger-Huet anomaly. Bone marrow biopsy showed markedly hypocellular marrow (10-15%) with 2% blasts, dysplastic erythrocytogenesis (nuclear budding, irregular contours, and satellitosis) and dysplastic leukogenesis (nuclear hyposegmentation). Azathioprine was discontinued. Repeat bone marrow biopsy after 3 months revealed cellularity of 30 % and disappearance of dysplastic changes.

Although MDS is typically irreversible, it was reversed in our patient after discontinuation of azathioprine. The association of azathioprine and development of MDS is not well established in literature. There have been only a few case reports of azathioprine associated MDS. This case highlights this association. The presence of progressive macrocytosis may serve as an early marker of developing MDS before pancytopenia occurs. Early recognition and discontinuation of azathioprine may reverse MDS and halt progression to AML.

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Poster Presentation No. 108

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New-Onset Heart Failure from Left Atrium Compression by Thoracic Aortic Aneurysm

Introduction:

Thoracic aortic aneurysm (TAA) represents dilation of the thoracic aorta. It can present acutely as dissection or rupture. TAA can also cause symptoms from compression of surrounding structures. We present a rare case of TAA compressing the left atrium (LA), leading to new onset heart failure (HF).

Case:

A 47 years-old male with polycystic kidney disease presented with 2-week history of dyspnea, orthopnea and bilateral ankle swelling. On examination, he was found to be hypertensive, tachycardic and hypoxic. Pulses were full and equal bilaterally. Auscultation revealed bilateral inspiratory crackles and no cardiac murmurs. Electrocardiogram showed sinus tachycardia and repolarization abnormalities. Chest X-ray showed pulmonary congestion and dilated ascending aorta. Initial troponins were negative. Computed tomography angiogram revealed Stanford type-A dissection extending from aortic valve to brachiocephalic artery. At the level of the main pulmonary artery, TAA measured 8.5 cm and was compressing the LA. Echocardiogram showed normal ejection fraction and LA compression. The patient underwent Bentall procedure for aneurysm repair and was discharged to home, symptom free.

Discussion:

Chronic symptoms from TAA can occur from compression of the superior vena cava, trachea, bronchi, esophagus or, even the right atrium. Aortic root dilatation and resulting regurgitation can cause symptoms of HF. In our case above, the TAA was compressing the LA, causing pulmonary venous hypertension, leading to HF. This is a very rare presentation with review of literature showing only 5 cases so far. Diagnosis is based on clinical findings and imaging. Treatment involves operative repair of TAA.

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Poster Presentation No. 109

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Guillain Barre Syndrome Variant Complicating Acute Retroviral Syndrome

Introduction: Acute Retroviral Syndrome (ARS) is characterized by a nonspecific “flu-like” illness manifesting 1-4 weeks after acute HIV infection. Many associated neurologic developments like aseptic meningitis haven been commonly reported with this illness, but Guillain Barre is a relatively rare presentation. We present a classic case of ARS complicated with a Guillain Barre variant.

Case report: A 26-year-old female presented with a one-week history of generalized malaise, rash, and progressive weakness. On exam, she was febrile, tachypneic, and had a lacy reticular rash noted over her back and shoulders. Neurological exam revealed lower extremity weakness and diminished reflexes. Laboratory work up demonstrated WBC 3.3, Hg 11.6, platelet 112, ALT 129, AST 219, and HIV-1 antibody and p24 antigen reactive with subsequent viral load > 10,000,000. Supportive therapy was initiated, however the patient developed worsening neurological symptoms with extra ocular muscle weakness, encephalopathy, and new onset seizure. Lumbar puncture with routine analysis revealed protein of 256. MRI unremarkable. Neurology was consulted and the patient was diagnosed with Guillain Bare Syndrome (GBS), Miller Fisher variant. She received a five-day course of IVIG and had gradual neurologic improvement. She has been started on HIV therapy with good treatment response.

Discussion: This case highlights one of the unique manifestations of acute HIV infection. While Guillian Barre is a relatively rare manifestation of acute HIV, the Miller Fisher variant has only been reported in one prior case. Clinicians should be aware of this association and consider HIV testing in patients presenting with this condition.

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Poster Presentation No. 110

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A Fatal Case of Paroxysmal Nocturnal Hemoglobinuria

Paroxysmal nocturnal hemoglobinuria (PNH) is a rare disease, that has an estimated prevalence of 1-10 case per million. Due to this low prevalence and non-specific features, delays in diagnosis can complicate the course of this disease.

The patient is a 64 year old African American female who presented with bleeding gums. Initial labs showed severe pancytopenia. Further work up revealed Coombs negative hemolytic anemia and a normal bone marrow biopsy. PNH cells were identified by flow cytometry. Around the time of the diagnosis the patient suffered from respiratory distress thought to be due to thrombosis ultimately leading to her demise.

NPH is a rare disease that has a wide range of presenting signs and symptoms. Diagnosis should be suspected in a patient with pancytopenia with Coombs negative hemolytic anemia. The diagnosis is confirmed with flow cytometry. The course of the disease is usually chronic however can be associated with severe morbidity and mortality with a 5 year survival rate being around 50-70%. Eculizumab is the treatment of choice for mild and moderate cases. Allogenic hematological cell transplant is the only curative modality, and is usually reserved for severe cases. Thrombosis can happen in up to 40% of the cases. It's believed to be the leading cause of death in patients with NPH, with the venous side being more affected than the arterial system.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 111

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Monoclonal Gammopathy Presenting as Gangrene

INTRODUCTION:

Type 1 cryoglobulinemia secondary to monoclonal gammopathy causes

a hyperviscosity syndrome which may be associated with vascular stasis resulting in digital ischemia. The proportion of patients with type 1 Cryoglobulinemia varies substantially among case series but account for 5% of cryoglobulinemic vasculitis.

CASE

A 72 year old white male presented with gangrene in the right 4th toe, purple discoloration in the right 3rd toe, and new onset Raynaud's phenomenon in the right index finger after mowing the lawn in the cold weather in November.

Exam revealed a livedo pattern in the lower legs and feet and ischemic changes of the right 3rd and 4th toes. Complete blood count, chemistry profile, ANCA, cardiolipins, UA, complement C3, C4, and Hepatitis C were negative, but IgG cryoglobulins were markedly positive. Serum protein electrophoresis and immunofixation revealed an IgG monoclonal gammopathy. The vasculitis initially responded to high dose steroids and Rituximab but subsequently the patient developed ulcers on the left ankle. He was then treated with the multiple myeloma drug protocol consisting of Decadron, Cyclophosphamide, and Lenalidomide with complete resolution of ulcerations.

Discussion.

We present a rare case of recurrent, refractory vasculitis of Type 1 cryoglobulinemia secondary to MGUS which required a multiple myeloma chemotherapy protocol to resolve the vasculitis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 112

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A Case of Ice Hockey Lung, an Uncommon Cause of Shortness of Breath

Introduction: Indoor ice Hockey Nitrogen Dioxide (NO₂) toxicity is not widely reported, its exposure may cause significant lung damage and morbidity.

Case. A 23 year old previously healthy male presented with shortness of breath. Patient says he played ice hockey last night and since then he has difficulty breathing and mild cough. He plays ice hockey and drives the ice rink, Zamboni. Further discussion reveals that other members of the hockey team also developed similar symptoms and visited different Emergency departments. Examination revealed Tmax 98F, HR 103, RR 28, Hypoxia on room air, respiratory distress and minimal wheezing. Initial tests were as follows. WBC 7.2, HCO₃ 26, AGAP 8, methemoglobin and carboxyhemoglobin within normal range, rapid influenza test negative. Chest radiographs showed bilateral parenchymal infiltrative lesions. He was immediately treated with nebulized albuterol transitioned to BIPAP, and IV Solu-medrol, azithromycin and ceftriaxone. Further workup with CT Chest showed interstitial infiltrates suggestive of pneumonitis. Subsequently, he had gradual improvement, his antibiotics were discontinued, transitioned to nasal cannula and oral steroids. He was discharged home on Albuterol inhaler and steroid taper. He followed-up in office two weeks later with repeat Chest Xray which was unremarkable for infiltrates seen on previous radiographs.

Discussion. Acute Shortness of breath is a common clinical presentation due to the variety of illnesses like COPD, Asthma. Exposure to Nitrogen Dioxide (Ice hockey lung) is rare but should be considered especially in patients who present in masses and are high risk for exposure with idiopathic acute pneumonitis.

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Poster Presentation No. 113

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

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

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

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

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Poster Presentation No. 114

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Wedge Shaped Pulmonary Infarct: Not Always a Pulmonary Embolus

Introduction: A wedge-shaped pulmonary infarct suggests a pulmonary embolism as the most likely etiology. However, when an individual with no risk factors for venous thromboembolism develops an infarct, other etiologies must be explored.

Case: A 34 year old male with a history of right nephrolithiasis presented with a complaint of right flank and chest pleuritic pain for one day. He had used cocaine three days prior earlier. He denied venous thromboembolic(VTE) risks factors. Physical examination was unremarkable. Labs included a white blood count of 12.4 (Neutrophils 79%), a normal urinalysis, negative pro-calcitonin level and positive urine toxicology for cocaine and opiates. Chest X ray showed right basilar scarring versus atelectasis. Computer tomography(CT) of the abdomen showed trace right pleural effusion with a wedge shaped hazy airspace consolidation in the right lower lobe. Chest CT angiography showed a wedge infiltration of the right lower lobe associated with pulmonary emphysema, but no pulmonary embolism.

The patient received supportive care with fluids, analgesics, and antibiotics for possible pneumonia. After considering the findings and not identifying another etiology, we concluded his presentation was from cocaine induced pulmonary infarct.

Discussion: A wedge shaped pulmonary opacity is usually suggestive of pulmonary infarct from VTE. However, other etiologies must be explored especially with a history of cocaine use. Cocaine induced lung injury, "crack lung," usually presents as diffuse alveolar damage and hemorrhagic alveolitis. However, solitary lesions and infarcts have been reported and attributed to direct toxicity of cocaine, cocaine metabolites and its vasoconstrictive effects.

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Poster Presentation No. 115

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Severe Pneumocystis Jirovecii Pneumonia During Treatment for Cushing's Syndrome

Introduction:

Pneumocystis jirovecii pneumonia (PJP) was a rare opportunistic infection until the AIDS epidemic. PJP in non-HIV patients develops in patients receiving high dose steroids, various chemotherapeutic and immunosuppressive agents. We report a case of severe PJP during therapy for Cushing's syndrome.

Case presentation:

A 67 year old female who was recently diagnosed with an ACTH producing carcinoid tumor of the lung. Treatment was initiated with mifepristone as an outpatient but ketoconazole was started as an inpatient. She was initially admitted for diabetic ketoacidosis but two weeks after starting the ketoconazole she developed fever, respiratory distress, hypoxia and rapidly progressive pulmonary infiltrates on chest x-ray. Chest CT imaging demonstrated extensive ground-glass opacities. Based on her history, a very high LDH level and deteriorating course she was empirically placed on high dose sulfamethoxazole/trimethoprim. A diagnosis of PJP was confirmed by a markedly elevated beta-D-glucan and positive sputum PCR for Pneumocystis jirovecii. She developed acute respiratory distress syndrome requiring a prolonged course of intubation. She was subsequently extubated and transferred to a long term acute care facility.

Discussion:

Unlike HIV patients who present with a more indolent course, non-HIV patients often have a rapidly progressive course. The most common time frame for patients on high dose steroids to develop symptoms is during the steroid taper. Our patient presented during treatment for endogenous production of cortisol with documented lower levels of cortisol. Early recognition and therapy is critical as this condition results in significant morbidity and mortality.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 116

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The Prevalence and Management of Vitamin D Deficiency in an Urban Primary Care Practice in Michigan

Introduction:

Vitamin D deficiency is an emerging public health problem. We assessed the prevalence of vitamin D screening and treatment in a resident-run urban primary care clinic.

Method:

This is a retrospective chart review of patients with at least two visits to the clinic between 1/2013 and 12/2016. Data were collected on screening, risk factors and treatment.

Results:

The prevalence of screening was 40.6% (171/421). Only 19.8% of patients had adequate levels (>30 ng/ml), 20.4% had insufficient levels (20-30 ng/ml) and 59.6% were deficient (<20 ng/ml). 62.5% were offered supplements and 55.5% had a follow up level checked.

The mean vitamin D level was significantly lower in Blacks than in Whites (18.8 ± 11.1 vs. 30.4 ± 17.5 , $p=0.007$). Levels were associated with age ($r = 0.4$, $p<0.0001$) and BMI ($r = -0.2$, $p=0.008$). Smokers had lower mean levels than former/ never smokers (16.6 ± 8.9 vs. 21.4 ± 13.4 , $p=0.009$). Patients already taking vitamin D had higher levels than those not on supplements (28.7 ± 14.1 vs. 17.6 ± 10.9 , $p<0.0001$). CKD patients also had significantly higher levels. Multivariable linear regression controlling for previous use of supplements, found that vitamin D level was associated with age ($b = 0.24$, $p<0.0001$), race ($b = -9.9$, $p<0.0001$), and BMI ($b = -0.18$, $p=0.02$).

Conclusion:

We found a high prevalence of vitamin D deficiency in patients at a resident clinic, especially African Americans. Further efforts to educate residents about vitamin D screening, particularly in younger African-Americans is required.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 117

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Mediastinal Plasmablastic Lymphoma: An Extremely Rare Initial Presentation of AIDS

Introduction: HIV-associated lymphoproliferative disorders are a heterogeneous group of diseases that arise in the presence of HIV-associated immunosuppression, among the rarest of which are plasmablastic lymphomas, representing only 2-4% of HIV-associated lymphomas.

Case Presentation: A 58-year-old African American male presented to the emergency department with acute hypoxic respiratory failure. Physical exam demonstrated absent breath sounds on the right, coarse rhonchi on the left, and clubbing of the nails. Imaging of the chest revealed a large mediastinal mass completely obstructing the right mainstem bronchus. Biopsy of the mass confirmed diagnosis of plasmablastic lymphoma. Due to high association of this tumor with HIV, patient was subsequently tested and found to be positive for HIV-1 with a CD4 count of 13 and viral load of 46,700. Chemotherapy utilizing EPOCH with bortezomib was initiated and the patient was scheduled to follow up as an outpatient to begin HAART.

Discussion: This case illustrates an atypical presentation of a rare AIDS-associated malignancy as initial manifestation of disease. It is vital for the practicing internist faced with a new diagnosis of lymphoma to be conscious of lymphoproliferative disorders as the first presenting sign of HIV infection, and so as not to overlook a crucial factor in treatment. Prognosis for patients with plasmablastic lymphoma is poor with a median survival of 3 months for HIV positive patients. Due to the rarity of this entity, there is little consensus regarding guideline directed therapy. However, early recognition of HIV and initiation HAART has been demonstrated to improve outcomes.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 118

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Bartonellosis in HIV: Protean Presentations in the Same Patient

Bartonellosis is an infectious disease caused by *Bartonella* spp, usually presents as cat scratch disease in immunocompetent host or produces a broad array of additional manifestations in immunocompromised host. Our case illustrates protean presentation of Bartonellosis manifested as bacillary angiomatosis, peliosis hepatis and endocarditis in the same patient.

A 47 y/o AAM recently diagnosed with AIDS (CD4=12), *Pneumocystis jirovecii* pneumonia and CMV hepatitis. US of the liver showed few well-circumscribed lesions, consistent with hemangiomas. He was treated and discharged on Genvoya, valgancyclovir, and atovaquone.

Two months later, he presented with slowly developing diffuse papulo-vascular lesions and fever. During this admission, a new aortic murmur was noted. Labs revealed WBC 9.7, CD4 56, viral load 73 and normal liver enzymes. Blood culture remained negative but *B. Henselae* antibody was 1:1024, *Bartonella* PCR was positive and a skin biopsy revealed bacillary granulomas. An echo demonstrated aortic valve vegetation with severe AR. Patient was started on doxycycline plus gentamicin for 14 days and to continue doxycycline for three months with noticeable regression of the skin lesions.

Bartonellosis is a disease with protean manifestations resembling other ailments. It was first noted to cause endocarditis in 1993 and is considered a common cause of culture negative endocarditis. It also causes bacillary angiomatosis and peliosis hepatis. High degree of suspicion is essential for diagnosis given its fastidious growth and limited sensitivity of histopathological stains. This case illustrates the importance for internists to be aware of this rare serious disease and its protean presentation.

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Poster Presentation No. 119

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Disseminated Nocardiosis; A Sporadic Case with a Rare Manifestation, Septic Arthritis!

Nocardia spp are Gram-positive bacilli, which are modified acid-fast positive. They uncommonly cause opportunistic pulmonary and disseminated infections, particularly in immunocompromised individuals. Articular involvement is a rare presentation of disseminated infection. *Nocardia farcinica* is a relatively infrequent cause of Nocardiosis, implicated in about 10% of cases.

An 83-year-old male with a past medical history of chronic obstructive pulmonary disease and bronchiectasis, on multiple courses of oral steroids, presents to the hospital with sepsis secondary to a septic joint and worsening of respiratory status. He was recently discharged after a prolonged hospitalization for *Mycobacterium xenopi* bronchiectasis and *Stenotrophomonas maltophilia* pneumonia. He was treated with rifampin, ethambutol, and clarithromycin with minimal improvement of his pulmonary symptoms. Surprisingly, the joint aspirate culture grew *Nocardia farcinica*. Accordingly, his antibiotic regimen was adjusted to imipenem and moxifloxacin. The patient was later transitioned to trimethoprim/sulfamethoxazole and moxifloxacin with resolution of his sepsis and improvement of his pulmonary status. Interestingly, none of his sputum studies for acid-fast bacilli grew nocardia. *Mycobacterium xenopi* was deemed a contaminant as the patient's pulmonary status improved after initiating trimethoprim/sulfamethoxazole.

Disseminated nocardiosis is a rare disorder that is associated with significant morbidity and mortality in immunocompromised patients, particularly those on chronic or frequent doses of oral steroids. *Nocardia* species can result in a wide range of infections, thus, it's important to suspect *Nocardia* as an etiological agent for septic arthritis, especially in this patient population.

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Poster Presentation No. 120

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Why is my Leg Turning Black?

Introduction:

Clostridial myonecrosis is a highly lethal necrotizing soft tissue infection caused by toxin producing Clostridium species. Presently, 90% of contaminated wounds demonstrate clostridial organisms, but fewer than 2% develop myonecrosis.

Case:

82-year-old female with past medical history of hypertension presented due to worsening right ankle swelling and pain. Patient had sustained an injury to the area 5 days prior to the presentation when a truck door closed on her right ankle while attempting to get off it. She had been seen in the emergency department on two separate occasions and was told her symptoms would resolve with conservative management. On this occasion patient had systemic findings of fever (102 F), leukocytosis. On examination, right lower leg and ankle was exquisitely tender, warm and erythematous. An area of fluctuance had developed with overlying hemorrhagic bulla formation. Attempt was made to aspirate the joint through the inflamed skin and patient was started on IV antibiotics. Despite these interventions her ankle continued to worsen with necrotizing bullae formation and black discoloration. She ultimately required incision and drainage along with excisional debridement of the wound down to the muscle with wound VAC application due to myonecrosis. Aspirated fluid cultures were positive for Clostridium perfringens. Patient was transitioned to PO augmentin and was discharged to rehab facility.

Discussion:

Our case illustrates that clostridial myonecrosis can be a devastating complication of what may seem to be an innocuous injury. Successful outcome requires rapid diagnosis and aggressive early treatment which includes surgical debridement and antibiotics.

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Poster Presentation No. 121

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Autoimmune Uveomeningeal Syndrome Triggered by Mosquito Bites

Introduction: The uveo-meningeal syndromes are a group of disorders with uveal, retinal and meningeal findings whose etiologies include infectious, neoplastic, inflammatory or autoimmune.

Case: A 22 year-old American Indian male presented with headaches and fevers for one week. Travel history was significant for camping in Northern Michigan where he was ravaged by mosquitos. Vital signs were significant for tachycardia, and physical exam showed photosensitivity with no meningeal signs. A CT head was negative and he was discharged home. Patient returned the next day with worsening headaches, bilateral eye pain and a temperature of 101.8 F. Labs were significant for ESR of 40. CSF analysis showed 66 WBCs and 19% PMNs, and notably negative for Lyme, West Nile and Herpes Simplex viruses. Patients symptoms continued to worsen and he developed increased ocular erythema. Tonometry revealed a pressure of 22 (left) and 13 (right). Woods lamp and fluorescein uptake tests were normal. He evaluated by ophthalmology and diagnosed with pan-uveitis.

Discussion: Vogt-Koyanagi-Haradada (VKH) Syndrome is among the inflammatory uveo-meningeal syndromes; characterized by pan-uveitis, neurologic impairment and skin changes. The commonly affected races includes American Indians. The four phases are: prodromal (headaches and CSF pleocytosis), uveitic, convalescent and cutaneous. An autoimmune attack against melanin containing cells in the cochlea and meninges are responsible for these symptoms. Clinicians should keep in mind that red eyes in a patient with aseptic meningitis could be due to a uveomeningeal syndrome and not just due to fevers.

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Poster Presentation No. 122

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Acute Colonic Pseudo-Obstruction (ACPO) a Rare Complication of Acute Motor Axonal Neuropathy (AMAN)

Acute motor axonal neuropathy (AMAN) is a rare pure motor axonal form of Guillain-Barré syndrome (GBS) accounting for 3-5% GBS cases in Western countries. Autonomic dysfunction is a common complication of GBS and its variants; present in up to two-thirds of those affected. However, acute colonic pseudo-obstruction (ACPO) also known as Ogilvie syndrome, is rarely reported as a presenting symptom of GBS.

Case Presentation: 50-year-old Caucasian female with a history of diabetes with nephropathy presents from ECF with altered mental status. She was recently hospitalized for worsening paresthesia without bladder or bowel dysfunction. She was evaluated by neurology and underwent a workup including MRI of the cervical spine, which was benign with no indications of progressive neuropathy. In the ER, she was found to have abdominal distention. CT-abdomen, demonstrated ACPO, and gastrografin studies revealed no perforations. Patient required fecal disimpaction. Stool cultures for ova and parasites were negative. After a protracted ICU course, symptoms of ascending neuropathy and weakness became apparent which in part were contributed to by critical care neuromyopathy. Lumbar puncture demonstrated elevated CSF protein without white blood cells, suggestive of GBS with ascending paralysis. EMS studies demonstrated axonal degeneration suggestive of AMAN.

Discussion: The presences of GBS variants such as AMAN have been well established in the literature. However, the limited presentation of AMAN seen in the western world along with the unusual and rare initial appearance of ACPO as the inciting reason for hospitalization, make this case a rare and interesting case for academic study.

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Poster Presentation No. 123

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Double Whammy: Simultaneous Occurrence of Group A Streptococcus and Epstein-Barr Virus

Group A streptococcus (GAS) pharyngitis and Epstein-Barr Virus (EBV) infectious mononucleosis are associated with exudative pharyngitis. Incidence of coinfection has been reported to range from 3 to 33% with limited data from young adult population. We hereby report a case of simultaneous occurrence of GAS and EBV.

A 21-year-old male presented with one week history of fever, fatigue, and sore throat. Rapid GAS antigen test was positive, for which patient was started on amoxicillin. He was admitted 4 days later with syncopal episodes along with a diffuse rash. On admission patient was febrile with enlarged exudative tonsils, anterior cervical lymphadenopathy abdominal tenderness and macular rash. Laboratory data revealed: Hemoglobin of 10.3 g/dL with elevated transaminases (AST 137 IU/L, ALT 326 IU/L) and ASO titer (344 IU/ml). Serology for EBV Capsid antigen IgM and monospot was positive. Computed tomography of abdomen showed hepatosplenomegaly with peri splenic hematoma. Patient was started on penicillin for GAS and steroids for impending airway obstruction. Hospital stay was complicated with further drop in hemoglobin requiring blood transfusion. Over the next 5 days the patient improved and was discharged home.

This case illustrates coinfection with GAS and EBV. GAS may be a secondary pathogen with synergistic effect in inflamed tonsils. Amoxicillin induced rash has been reported in EBV (30%) with splenic rupture reported rarely (0.5%). Young adults being treated for GAS and not responding should be further evaluated for EBV. Corticosteroids should be considered for

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Poster Presentation No. 124

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Use of a Standardized Scoring System to Predict Mortality Rate Among Patients Admitted to a Tertiary Care Center with Febrile Neutropenia

Introduction:

Febrile neutropenia (FN) remains a serious complication of chemotherapy, current standard of care dictates hospitalization taxing healthcare resources and increasing risk of nosocomial infections. Multinational Association for Supportive Care in Cancer (MASCC) algorithm defines a score which predicts less than 10% complication rate. We believe a CQI/EBM program based on the MASCC algorithm can promote early discharges or outpatient management for low-risk patients.

Methods:

A retrospective analysis of data collected from January 2013 to June 2016 was performed on admissions of FN to St. John Hospital. Patients were classified into hematological or solid malignancies, MASCC score was calculated categorizing patients as high or low risk. Further analysis was conducted comparing length of stay (LOS) and mortality.

Results:

100 cases of FN, 52 hematological malignancies, 32 low risk patients with average LOS 6.75 days and mortality rate of 6.25%, 20 high risk patients with average LOS 16.1 days and mortality rate of 25%. 48 solid malignancies, 24 classified as low risk patients with average LOS 3.95 days and zero deaths, 24 high risk patients with average LOS 7.46 days and mortality rate of 33.3%.

Discussion:

Outpatient management for low risk FN has become increasingly appealing as it offers patients convenience, reduced nosocomial infections and economic benefits. Our data demonstrated that low risk MASCC score predicted overall low mortality with lower LOS. By incorporating the MASCC score during admission, high-risk patients can be entirely managed inpatient whereas low-risk patients may be discharged early or managed as outpatients.

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Poster Presentation No. 125

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Primary Hyperparathyroidism in Pregnancy: A Case of Symptomatic Primary Hyperparathyroidism in an 18 year-old Primagravida

Introduction

Primary hyperparathyroidism (PHP), although most commonly seen in women 50 to 65 years old, can rarely present during pregnancy, posing an additional challenge to the physician.

Case Presentation

We present a case of an 18-year-old female G1P0 at 13 +/- 1 week gestation who presented with abdominal pain, nausea, vomiting, and decreased appetite for 2 days. On chart review, she had presented earlier in the year with similar complaints, elevated calcium, and PTH, as well as a negative Technetium sestamibi scan. On this presentation, her calcium was 14.6 mg/dL, magnesium 1.7 mEq/L, phosphorus 2 mg/dL, PTH 233.5 pg/mL, and Vitamin D 10.1 ng/mL. Urinary pregnancy test and transvaginal ultrasound confirmed a viable intrauterine gestation. She received aggressive medical management without significant improvement. An ultrasound and MRI of the neck were negative for an identifiable parathyroid adenoma. The patient eventually required surgical exploration, which showed a large right superior parathyroid gland. Pathology confirmed hypercellular parathyroid tissue. Following its resection, PTH decreased to 5.2 pg/dL and calcium to 8.4mg/dL with resolution of her symptoms.

Discussion

PHP during pregnancy can lead to preterm labor, intrauterine growth retardation, and stillbirth, as well as increased maternal morbidity and mortality. Given these risks, minimally invasive parathyroidectomy is the therapeutic gold standard during the second trimester in patients with PHP and calcium levels >11.4 mg/dL. This case supports the evidence of early surgical intervention in the second trimester of pregnancy in the setting of severe hypercalcemia secondary to PHP.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 126

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Horse or Zebra? A Case of Pancreatic Cancer and an Isolated Brain Mass

Pancreatic cancer metastasizing to the brain ante-mortem has only been documented in about 20 cases to date, the majority of these cases presented with widespread metastases to other organs.

The patient is a 68 year old man with a history of pancreatic adenocarcinoma diagnosed three years prior. He had been treated with folfinox and radiation without significant progression of his disease. He presented to the emergency department (ED) complaining of slurred speech that he noticed upon waking that morning. He had an identical episode a month ago, but had quickly resolved. He denied any other neurological symptoms. CT of the head revealed a hypoattenuating mass in the left posterior frontal lobe extending into the temporal lobe. Further imaging with MRI confirmed the mass. Interestingly, subsequent imaging to restage the disease revealed no other areas of metastases and showed that the pancreatic tail mass had actually decreased in size. This raised the question that perhaps this may be a new neoplasm entirely. The patient underwent craniotomy with gross resection of the tumor. Histopathological analysis revealed metastatic adenocarcinoma consistent with pancreatic origin.

The case presented here is unique in that, despite no progression or local spread of the pancreatic mass, isolated metastasis to the brain still occurred. This case illustrates how tumor spread is not predictable and reminds us of the importance of considering known facts before looking for alternative possibilities.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 127

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Intussusception Not Just a Pediatric Problem

In adults, intussusception is found in only 1% of patients with bowel obstructions and 5% of all intussusception. More than 90% of the cases have distinct lead points. Malignancy is the most common cause of pathologic lead point. Crohn's disease was shown to be a predisposing factor for ileoileal intussusception.

20 year old male with known history of Crohn's previously on Vedolizomab, presents with an acute flare of his disease and was initially rehydrated intravenously along with IV steroids. He was slightly hypotensive and tachycardiac. Abdominal exam demonstrated a diffusely tender abdomen with no signs of guarding or rigidity. CT Abdomen revealed mucosal enhancement and wall thickening of the terminal ileum and cecum indicating Crohn's flare up along with Jejunal jejunal intussusception in the left upper quadrant persistent on both arterial and delayed phases. No surgical intervention was planned as no lead point was identified. A small bowel follow through with gastrografin revealed resolution of the intussusception. The patient subsequently got better with appropriate management of his Crohn's flare and was discharged

While most cases of adult onset intussusception require a surgical approach it is important for clinicians to be aware that it is not true for all cases.

Transient intussusception has been observed occasionally on small bowel barium studies in patients with Crohn's and adult celiac disease. If no lead point is identified or in cases of transient small-bowel intussusceptions in the setting of celiac sprue or Crohn's disease surgery is not needed.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 128

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Bleeding to Death: A Rare and Atypical Presentation of a Life-Threatening Bleeding from a Gastrointestinal Stromal Tumor

Introduction:

Gastrointestinal stromal tumors (GISTs) are the most common non-epithelial benign neoplasm of the GI tract. The majority of these tumors are relatively benign without any lethal complications. They are commonly associated with abdominal pain and bleeding, however massive bleeding that requires emergent surgery is rare. Presented is an atypical case of significant and critical hemorrhage from a small GIST tumor of the stomach.

Case Study:

A 68-year-old man with past medical history of hypertension presented to the hospital after sudden onset of hematemesis. Patient was hemodynamically unstable with hypotension, tachycardia and anemia requiring urgent volume resuscitation as well as blood transfusions. Once stabilized an upper gastrointestinal endoscopy was completed which revealed a 25-mm submucosal lesion with an ulcerated tip in the gastric fundus. Severe hematemesis returned with melena resulting in hypotension and prominent anemia requiring ICU admission. Due to instability of the patient, urgent surgery with resulting laparoscopic gastric resection of the mass was performed with pathology consistent with a low grade gastric stromal tumor.

Conclusion:

GIST is a very common gastric tumor with typically uncomplicated course. They are usually associated with benign symptoms such as abdominal pain and anemia. This case presents an atypical presentation of a small GIST tumor with low mitotic index resulting in spontaneous rupture and significant gastrointestinal hemorrhage. Highlighted is the importance of recognizing the possible and infrequent complications of GIST tumors. Spontaneous rupture of a GIST tumor is a medical emergency requiring immediate surgical intervention and careful follow up.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 129

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A Curious Case of Headache: Typical and Atypical Presentation of Cryptococcus Meningitis

Introduction:

Cryptococcus meningoencephalitis (CM) is an opportunistic infection that is seen among patients with untreated AIDS with a CD4 count < 100 cells/microliter. CM presents with fever, malaise, and headache explained by increased intracranial pressure (ICP) with opening pressures often exceeding 200 mm H₂O. We would like to report a case of CM with a normal opening pressure and with a CD4 count 199 cells/microliter.

Case report:

A 55-year-old gentleman presented with a headache, vomiting and unsteady gait for 3 weeks duration. On the 2nd day, he developed a fever 101.8 F. With a persistent headache and neurological disturbances, it was deemed appropriate to perform an LP. CSF analysis showed a white blood cell count of 312/mm³, lymphocytic 99%, protein level of 272.3 mg/dl, glucose level of 70 mg/dl and an opening pressure of 20 mmH₂O. CSF also showed positive Cryptococcal antigen titer of 1:640 with additional positive titer for syphilis, antibodies to toxoplasmosis and Borrelia burgdoferi. Additional testing found to be HIV positive with a CD4 count of 199 cells/microliter.

Conclusion:

This case illustrates the importance of recognizing headache as a potential cause of meningitis, particularly with Cryptococcus neoformans, as this patient had multiple workups in the past with a missed diagnosis. The CSF analysis was consistent with CM, however, the opening pressure was only 20 mmHg. CM is associated with HIV and CD counts less than 100 cells/microliter, however, in our patient CD count was 199.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 130

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A Fatty Cause of Neuropathy

Grant Lightfoot MD, Internal Medicine, Providence Hospital and Medical Center, Southfield, Michigan.

The differentials for lower back pain and for leg weakness are broad, including common and uncommon conditions. In this case, common causes were ruled out and diagnosis ultimately depended upon an MRI.

A 77 year old African American male presented with complaints of inability to ambulate due to progressive weakness in his legs. He had progressed from using a cane to inability to ambulate. He reports a concurrent decrease in sensation in the legs, and chronic lower back pain. The patient admitted to drinking one bottle of wine and half a pint of liquor daily for 20 years. He also noted constipation, weight gain and decreased appetite over the past year.

Physical exam was notable for slow mentation, obesity, and decreased sensation in both legs. Strength was 3/5 in the legs and 5/5 in the arms. The rest of the exam was unremarkable. ANCA, vitamins and cortisol levels were normal, however TSH was 20.3. A lumbar x-ray showed only joint space narrowing. MRI showed severe epidural lipomatosis throughout the lumbar spine.

Epidural lipomatosis is usually associated with long term exogenous steroid use, and is otherwise associated with endogenous steroid overproduction, obesity, or endocrinopathies such as hypothyroidism, Cushing's syndrome or prolactinomas. Symptoms are most commonly lower back pain, lower extremity weakness, paresthesias, and, rarely, bowel or bladder incontinence. Weight loss and treating underlying metabolic derangements are first line therapies, with decompressive surgery an option when conservative measures fail.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 131

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An Uncommon Case of Stevens-Johnson Syndrome Linked to Vancomycin Therapy

Stevens-Johnson Syndrome (SJS) is a rare hypersensitivity reaction typically characterized by skin and mucosal involvement. Medications including allopurinol, carbamazepine, and phenytoin continue to be a predominant cause of this condition. SJS caused by vancomycin, however, remains quite unusual and has been reported in less than 10 cases.

A 62-year-old female underwent lumbar fusion for intractable back pain. She was discharged after an uncomplicated stay but returned three weeks later after developing postoperative wound drainage and increased pain. Wound cultures demonstrated MRSA and vancomycin was initiated. Two weeks after beginning therapy the patient presented again to the emergency department with complaints of blisters on her lower lips, ocular drainage, and intense pruritus over much of her body. A diagnosis of SJS was presumed and vancomycin was promptly discontinued. Physical examination revealed vesicular lesions in the oral and vaginal mucosa, uvular edema, purulent drainage from the right eye, conjunctival injection, and a faint macular rash on the arms and legs. Her temperature was 100.4 degrees Fahrenheit and leukopenia was present on admission. High-dose corticosteroids were initiated in addition to symptomatic treatment with a proprietary blend mouthwash and emollient cream. The patient's symptoms slowly improved and on hospital day nine she was discharged to complete a six week course of daptomycin.

This case illustrates the potential for a rare and severe mucocutaneous reaction with a commonly prescribed antibiotic. Although there have been few reported cases of vancomycin-induced SJS, early recognition was critical in limiting progression of disease course.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 132

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Missing Lead: A Twiddling Mystery

Implantable Cardioverter Defibrillator (ICD) is an implantable device that monitors heart rhythm and delivers an electric shock to restore normal rhythm when arrhythmias are detected.

Despite their proven benefits, ICDs are not risk-free. Early post-discharge complications occur in up to 4-11% of new implantations including hematoma formation, device malfunction, lead problems, and infections.

In this report, we present an elderly female with a single lead ICD who presented as a case of Twiddler's Syndrome with chief complaint of new onset persistent hiccups. Twiddler's Syndrome is a rare complication (0.007%) associated with ICD implantation. It occurs when the pulse generator rotates in its pocket resulting in lead coiling. A chest radiograph usually establishes the diagnosis. In our case, the diagnosis did not require the use of a chest radiograph as the initial ICD interrogation indicated phrenic nerve stimulation and the echocardiogram failed to show the ICD wire in the right atrium or right ventricle in the absence of perforation and effusion. Subsequently, fluoroscopy was scheduled followed by lead revision.

Physicians should be aware that these findings may represent Twiddler's syndrome in the appropriate clinical setting in order to avoid the detrimental consequences associated with failure to recognize this diagnosis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 133

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

Fixed drug eruption is a cutaneous drug reaction causing well demarcated, dusky lesions secondary to an offending medication. Lesions occur in the same locations upon re-exposure, leaving hyper-pigmented plaques after resolution. A rare variant of FDE called generalized bullous fixed drug eruption consists of bullae and diffuse desquamation. 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. She developed an urticarial rash on her thighs, lower extremities and posterior arms within thirty minutes of fluconazole ingestion. Sharply demarcated macules occurred in identical locations as when she had ingested acetaminophen two years ago. She denied acetaminophen use since that time. She was admitted to the hospital and treated for her symptoms. Twenty four hours after discharge, she had recurrence of angioedema, and bullae formation in her periorbital and intranasal area. A skin biopsy showed vacuolar dermatitis without full thickness necrosis, findings favoring a fixed drug eruption. She was treated with high dose prednisone and demonstrated bullae resolution with epidermal skin necrosis. She fully recovered over ten days.

Generalized bullous fixed drug eruptions are a rare subset of FDE. This case is valuable in that it demonstrates that severe GBFDE can occur with common drugs like acetaminophen and fluconazole. This atypical presentation of FDE illustrates the possibility of a rare cutaneous reaction with two chemically unrelated drugs.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 134

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Dizzy Dilemma: Vestibular Migraine or Atypical Multiple Sclerosis

Case Presentation: We present a case of a 45-year-old female with intractable vertigo and a fronto-parietal headache. She was previously seen in the ED for similar symptoms and was discharged home without a definitive diagnosis. Her medical history included bipolar disorder, morbid obesity, NIDDM, hypertension, and dyslipidemia. Her complaints were associated with photophobia, phonophobia, nausea, vomiting, gait disturbance, and galactorrhea. This last symptom prompted a work-up for prolactinoma one year prior - MRI had only demonstrated mild diffuse demyelination consistent with possible migraine etiology. She denied any visual disturbances, tinnitus, ear fullness, auditory hallucinations, weakness or aura. Physical exam revealed no saccades, nystagmus, or focal neurological deficits. Throughout her hospital stay she received meclizine, metoclopramide, prochlorperazine, diazepam, ondansetron, acetaminophen with caffeine, and hydrocodone - none of which provided any significant relief. ENT performed bedside vestibular testing, which favored a central etiology. Given her photophobia, phonophobia, and frontal headache, migraine was added to the differential and her symptomology was shown to meet ICH-B3 criteria for vestibular migraine. After receiving sumatriptan she had complete symptomatic resolution. An outpatient MRI procedure revealed intracranial demyelination with new plaque formation in the pons and middle cerebellar peduncle - with a notable plaque obscuring the left internal auditory canal. This was proceeded by a hospital admission for generalized weakness when she underwent CSF analysis which was positive for oligoclonal bands (5 total) and received an official diagnosis of Multiple Sclerosis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 135

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Gadobenate Dimeglumine Induced Coronary Spasm

Gadobenate dimeglumine is used worldwide in MRI and CMR. Its common side effects include nephrogenic systemic fibrosis, as well as anaphylactic reactions that can lead to cardiac arrest in rare instances. The incidence of coronary vasospasm following injection of gadolinium contrast is unclear and the following case depicts such a scenario. MRI of brain with gadobenate dimeglumine injection was performed on a 38 year-old male for evaluation of episodic diplopia. Following the injection, the patient developed urticaria, chest tightness, and laryngospasm. He was treated with epinephrine, intravenous steroids, and antihistamines with relief of symptoms and was discharged home with oral steroids. He returned 16 hours later with severe left sided chest pain. Initial vital signs were stable. Troponins were elevated and eventually peaked at 6.65ng/mL with no electrocardiographic evidence of ischemia. Coronary angiography revealed normal coronary arteries with myocardial bridging of the mid-left anterior descending artery. Echocardiography demonstrated normal global systolic function with no regional wall motion abnormalities. One episode of NSVT was noted during hospitalization. Chest pain and troponin elevation eventually resolved. He was discharged home with subsequent uneventful ambulatory follow up. This case describes coronary spasm of the myocardial bridging section due to a moderate anaphylactoid reaction to gadobenate dimeglumine. This represents a Type I variant of the Kounis syndrome, although it was atypical in the delayed response. While case reports exist of anaphylactic reactions to other gadolinium-based contrast media, we believe this is the first case report in the English literature of such a reaction.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 136

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Enterococcus Hirae Bacteremia Associated from Ascending Cholangitis

Enterococcus sp. are commensal organisms that are becoming increasingly associated with community and nosocomial infections. Enterococcus faecalis and faecium are the most common species involved in humans. Enterococcus hirae is a species of enterococcus found in chickens and is rarely associated with humans. In this case report, we present the 11th incidence of E.Hirae in humans and illustrate the challenges of managing immigrant patients with complex medical needs. The patient is a 79 year old Bengali female that presented to the ED with abdominal discomfort for 1 month. CT abdomen and pelvis revealed an obstructing pancreatic head mass, 15mm common bile duct dilation and 5mm liver lesion. Despite multiple comorbidities, the patient would be a good candidate for a whipple procedure if there was no presence of metastatic disease. Multiple imaging modalities were attempted to characterize the liver lesion. During her stay, the patient became confused and febrile. The patient underwent an emergent ERCP for suspected ascending cholangitis and transferred to the ICU due to septic shock. Blood cultures with MALDI-TOF confirmed the presence of Enterococcus hirae bacteremia. The patient recovered after 2 weeks of IV meropenem. After multiple discussions, the family decided to forgo surgical intervention for a biopsy to confirm pancreatic malignancy. Arrangements were made to transfer the patient to a facility with EUS capability. Due to unexpected delays, the patient and family opted to leave AMA and present directly to the accepting hospital. She was admitted and EUS confirmed the diagnosis of pancreatic adenocarcinoma.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 137

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Herpes Simplex Encephalitis Association with Intracerebral Hemorrhage

Herpes encephalitis is the most common non-epidemic encephalitis in the United States. Petechial cortical hemorrhage is a common known complication however intracerebral hemorrhage is rare. A 77 year old male presented to the hospital with complaint of headache, lethargy, cough, and difficulty in breathing. Within twenty four hours of admission the patient developed new onset seizure. Initial CT head imaging with and without contrast were negative. The patient was initiated on IV keppra however the patient continued to have difficulty following commands for two days after initial seizure activity. Repeat CT head w/o contrast was performed and showed asymmetric hypoattenuation and edema of the anterior right temporal lobe, concerning for ischemia vs. encephalitis. Evaluation of patient's spinal fluid was performed and positive for HCV PCR type 1. The patient was initiated on IV acyclovir and monitored in the intensive care unit. Throughout patient's hospital course, his mentation improved, however he remained aphasic. Repeat CT head imaging was performed and showed intracerebral hemorrhage at right temporal lobe with mass effect on right ventricle. Further evaluation is needed to determine if certain patient characteristics places them at higher risk for developing intracerebral hemorrhage.

Poster Presentation No. 138

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Chilaiditi Syndrome Leading to Ischemic Volvulus

Chilaiditi syndrome is a rare condition occurring in 0.025% to 0.28% of the population. This syndrome is diagnosed when the colon is displaced and caught between the right hemidiaphragm and the liver. Complications associated with this syndrome include obstruction, volvulus and/or perforation. Here we describe an 88-year-old woman with a history of Type 2 diabetes mellitus, hypertension, and hyperlipidemia presenting with sudden onset right upper quadrant abdominal pain, nausea, and vomiting. Physical exam revealed an afebrile woman with right upper quadrant and epigastric abdominal tenderness without peritoneal signs. Abdomen was distended and tympanic with diminished bowel sounds. Laboratory workup was normal except for a lactic acid of 5.3 mmol/L. Computed tomography (CT) scan was obtained which revealed a distended right colon up to 7 cm in transverse diameter with free air noted between the liver and right hemidiaphragm. The patient's symptoms continued to worsen over the initial 24 hours as she began to experience mild respiratory distress along with worsening abdominal pain and nausea. General surgery elected to take the patient to the operating room for an exploratory laparotomy. Intraoperatively, they found ischemic volvulus of the right colon, which was impinged between the liver and right hemidiaphragm, confirming Chilaiditi syndrome. Right hemicolectomy with primary anastomosis was achieved. Patient's symptoms improved and she was discharged after 10 days. The most likely cause in this patient would be from intra-abdominal adhesions from previous abdominal surgery in addition to laxity of ligaments due to age.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 139

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Giant Cell Myocarditis and the Role of Early Endomyocardial Biopsy

Introduction

Giant Cell Myocarditis (GCM) is a rare and deadly disease seen in relatively young individuals. It is known for its frequently missed diagnosis until autopsy or transplant, and its association with autoimmune conditions in 20% of cases.

Case

A 44-year-old male with a history of rapidly progressing cerebellar ataxia and vitiligo, presented with chest pain, shortness of breath and had multiple episodes of ventricular tachycardia (VT) in the emergency room. Blood work revealed elevated troponins, Erythrocyte sedimentation rate and C-Reactive protein. Electrocardiogram showed Q waves in lead 1, aVL without ST changes. Echocardiogram showed moderate global hypokinesis with an ejection fraction of 33%. Cardiac catheterization revealed unobstructed coronary arteries. Cardiac MRI showed minimal late gadolinium uptake, severely reduced global systolic function and cardiac edema. Lack of definite late gadolinium enhancement swayed suspicion away from GCM, thus delaying endomyocardial biopsy (EMB). Patient's hospital course was complicated by intermittent runs of non-sustained VT and cardiogenic shock requiring intra-aortic balloon pump support. He ultimately succumbed to cardiac arrest on day 5 of admission. On autopsy, he was found to have GCM.

Discussion

Untreated GCM is rare and fatal with significant improvement in long-term survival if treated appropriately, thus underlining the paramount importance of timely diagnosis. Cardiac MRI is inferior to endomyocardial biopsy in diagnosing GCM, with the gold standard being a surgical biopsy. Therefore, in the right clinical scenario, escalating investigation rapidly to include an EMB despite a benign MRI, may be lifesaving.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 140

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Improving Osteoporosis Treatment in Patients Hospitalized for Hip Fracture

Introduction

Osteoporotic hip fractures are associated with high morbidity and mortality and increase the risk for future fractures. Studies of post-fracture populations show that osteoporosis screening and treatment rates are less than 20%. Hospital admission for hip fractures provides an opportunity to initiate treatment for osteoporosis. Our objectives were to screen for vitamin-D deficiency and initiate vitamin-D supplementation as an initial step to improve inpatient management of osteoporotic hip fractures.

Methods

A hip fracture protocol was developed for patients admitted to the orthopedic team that included ordering 25-vitamin-D levels for each patient and initiation of vitamin-D supplementation before discharge if indicated. Orthopedic Surgery and Medicine Consult teams were educated about the new protocol. Rates of ordering vitamin-D levels and supplementation were collected before and after intervention and the data was graphed on a run chart.

Results:

35% of patients admitted with hip fractures had vitamin-D levels measured before our protocol was initiated vs 82% of patients post-intervention. 48% of patients had levels <30 and 57% of these patients were discharged on vitamin-D supplementation. Monthly percentages of vitamin-D levels measured were graphed and run chart rules were applied. The results were significant due to shift and trend of the data.

Discussion:

By implementing a systematic approach, we improved rates of treatment for vitamin-D deficiency, a common contributing factor to osteoporosis. More multidisciplinary and collaborative processes are needed to address this gap in care for hip fracture patients.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 141

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Ipilimumab and Nivolumab Associated Tenosynovitis in Metastatic Renal Cell Cancer (RCC)

Introduction: Immune checkpoint inhibitors, which increase antitumor immunity by blocking intrinsic down-regulators, are currently at the forefront of clinical studies. Unfortunately, by increasing the activity of the immune system, immune checkpoint blockade can lead to immune-related adverse events (IRAEs). This case illustrates a rheumatic IRAE.

Case Description: A 67 year-old-male with RCC presented with severe enterocolitis causing diarrhea after his third cycle of Ipilimumab and Nivolumab. Hospital course was complicated by bilateral ankle swelling and pain, left greater than right. Ultrasound of the left ankle revealed effusion and bursitis. Antinuclear antigen, rheumatoid factor, and anti-CCP antibodies were negative. He was diagnosed with immune-related tenosynovitis and treated successfully with steroids, resulting in resolution of both tenosynovitis and enterocolitis.

Discussion: Musculoskeletal IRAEs are rare, and the pathophysiology is still unclear. They are reported in 6-8% of patients treated with a single immune agent, and 10% in patients treated with dual immunotherapy. No defined guidelines currently exist for grading severity and treatment of rheumatic IRAEs, however most have been reported to be steroid-sensitive, and resolved within 6-12 weeks with prolonged courses of high-dose steroids. Physicians should be aware of IRAEs and recommended treatment.

Clinical significance: As the use of immunotherapy grows, internists will be encountering more frequent cases of IRAEs. Prompt recognition of IRAEs will lead to appropriate and timely treatment.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 142

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Improving Appropriate Use of Antibiotics in Pneumonia

Introduction: Emerging guidelines for pneumonia treatment recommend reducing antimicrobial therapy to 5-7 days. This QI project was undertaken to evaluate and improve antibiotic prescribing habits for pneumonia in IM residents.

Methods: In August 2017, the IM residents attended an educational session by a physician member of Michigan Hospital Medicine Safety Consortium (HMS) that outlined current guidelines and decision-making criteria for treatment of community and hospital acquired pneumonia. EMR data on appropriate choice and duration of antimicrobial therapy was collected over 4 weeks from September through October 2017. Charts were also audited for start/stop dates, and reasoning if antibiotic was continued beyond the recommended time frame. Half way through, the collected data were shared and brief education was performed.

Results: Although on admission, residents did not always document start date, duration, and stop date for antibiotics, the majority of discharge notes contained all necessary information (~65-90%). Following data share and education, improved documentation at admission and discharge was noted. For instance, all post-intervention discharge notes stated antibiotic duration and stop date. Treatment duration was appropriate at 83% pre-intervention and improved but did not reach 100% post-intervention. Appropriate antibiotic choice was noted at all pre- and post-intervention cases.

Conclusions and Significance: Overall, IM residents were responsive to education on shorter duration of antibiotic treatment of pneumonia and proper documentation. Education and data share can be an effective intervention to change antibiotic prescribing habits with an ultimate goal to decrease treatment-related complications and bacterial resistance.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 143

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Smoking Cessation QI

Objective: Cigarette smoking continues to be the leading cause of preventable disease and death in the United States. Although the overall incidence of cigarette smoking has decreased, it remains high among certain populations. Recent research has shown that smokers try to quit at least once a year with minimal success. It is estimated that the majority of Americans own cell phones and most send and receive text messages. The purpose of this QI project was to determine if a text program for smoking cessation would increase the success rate for quitting smoking in a resident run clinic.

Methods: Patients who were actively smoking were evaluated for their readiness to quit and offered a text-messaging program to help. The program, #QUITwithIHA, was previously developed and implemented by a large not-for-profit, multi-specialty group in Southeast Michigan. Patients received daily text messages of encouragement and tips to help them quit. At the end of two months we asked those enrolled if they were smoke-free.

Results: Of the 114 unique patients enrolled, at the end of 2 months, 4 (3.5%) had responded that they were smoke free.

Discussion: Based on the early data, it appears that we achieved some success with #QUITwithIHA. Although 3.5% is a low success rate, there is much that can be learned from this project. Next steps are to reach out to those enrolled to evaluate their experience, level of motivation to quit, appeal of the text messages sent, and barriers to achieving success.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 144

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Disseminated Systemic Embolism Due to Left Ventricular Thrombus in Setting of Acute Myocardial Infarction

Background: Presence of a left ventricular (LV) mass post myocardial infarction (MI) within 24 hours is rare. Current studies warn against excluding LV thrombus with negative echocardiogram if done within 48 hours.

Case: A 48-year-old female, with a history of venous thromboembolic episodes (VTE) presented with diffuse myalgias. She rapidly became obtunded and diaphoretic due to an acute inferior wall MI. A contrast tomography angiogram showed the proximal right coronary artery was completely occluded. Also seen, were thromboses in the abdominal aorta, right vertebral artery, and bilateral renal arteries. Surface echocardiogram was negative; however transesophageal echocardiogram revealed a multi-lobulated thrombus adjacent to a regional wall motion abnormality (WMA). Brain magnetic resonance image demonstrated an embolic stroke.

Decision-making: We postulated the MI and the resulting WMA provoked the development of the large LV thrombus. Embolization then caused cerebral and renal infarcts. Typically LV thrombus formation occurs two to seven days after an anterior wall MI. The timeline of this clinical presentation significantly altered our management. Percutaneous Coronary Intervention (PCI) and thrombolysis were not performed given the risks of thrombus propagation and hemorrhagic stroke conversion.

Conclusion: MI and LV thrombus after an inferior wall MI within 24 hours is rare. Given the inherent risks of embolization it is important to be aware of this potential and use caution when a transthoracic echocardiogram is obtained within this timeframe.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 145

Presenter: Fadi Hawa

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Performance of an iPhone Based Mobile Clinician Application for Reporting of Critical Results

Background: Timely communication of critical inpatient labs results is a key component of safe patient care. Previous systematic review demonstrated that failure to follow-up inpatient test results varied between 20-60%, with lack of follow-up of critical test results being one of the most concerning. Physicians view the current method of automated phone call with multiple voice prompts requiring acknowledgement to close the message as disruptive to workflow.

Objective: To compare the average response time between the currently used automated phone call method and

a new mobile application that allows the physician to answer the critical lab by a single click on a mobile device.

Methods: In November 2016, a retrospective before-and-after pilot study was conducted at SJMAA using the IHI model for improvement. Hospitalist attending physicians were given iPhones with a pre-installed application. Outcome measure was average response time to acknowledgement of message.

Results: There was a decline in average turnaround time for critical radiology results from 128 minutes to 33 minutes. Using run chart rules, this change is positive for a shift, though it appears that the change preceded the intervention. As regard to the critical lab response time, there was no obvious difference in the turnaround time between the two methods.

Conclusion: Mobile application may be an effective alternative method that could ensure faster response to reporting of critical results. Additional features may improve the mobile application's performance. This project has led to this intervention being rolled out to the teaching service.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 146

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Challenges of Disseminated Histoplasmosis in an Immunocompetent Patient

Introduction: Disseminated histoplasmosis in immunocompetent patients is not common and can present a diagnostic challenge. We report a case of disseminated histoplasmosis in an immunocompetent patient who lacks identifiable risk factors.

Case Description: 56-year-old male with history of hypertension presented initially with chief complaint of mouth pain and dysphagia for 1 month not improving with nystatin or prednisone, shortness of breath for 2-3 weeks and chronic headaches for 1 year. His history was negative for exposures to bird/bat guano, cave exposure and pets. He worked in oilfields and as a mechanic in different states including Alabama, Tennessee and Missouri. Physical examination revealed whitish discoloration and ulcers on tongue, clear breath sounds and mildly distended abdomen. Chest x-ray demonstrated patchy nodular infiltrates. Tongue biopsy results showed fungal stains consistent with Histoplasma. Laboratory work up revealed negative HIV testing, positive serum Histoplasma antibody and urine antigen, and negative CSF Histoplasma studies. CT studies demonstrated 2 foci of enhancement in right frontal region, severe splenomegaly, hepatomegaly and a 7mm lung nodule. Patient was diagnosed with disseminated histoplasmosis with presumed CNS involvement. He was started on amphotericin B with significant improvement. Amphotericin B was well-tolerated and transitioned to oral Itraconazole for one year.

Clinical Significance: This case highlights challenges associated with diagnosis of disseminated histoplasmosis when it occurs in a patient with no identifiable risk factors. Host factors that predispose an immunocompetent patient for progressive disseminated infection are not fully understood. Increased awareness is a key to timely diagnosis and treatment.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 147

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Batson's Plexus: An Open Highway for Infection

Case: Batson's venous plexus is a network of valve-less para-vertebral veins that connect the pelvic and thoracic vessels to the intra-spinal vessels. This type of network was first noticed in 1940 for clinicians to understand retrograde spread of infection and malignancy, apart from the lymph system.

Intro: 73 YO Man with PMH of HTN, OSA and spinal surgery several months ago presents with hematuria, abdominal pain and back pain after a fall. Patient denied any saddle anesthesia, but endorsed dysuria and constipation, which he attributed to narcotics. Physical exam revealed fever at 103, tachycardia and tachypnea. No neurological focal deficits noted. CVA tenderness bilaterally. Labs significant for leukocytosis at 15.5, lactic at 2.2, Cr of 1.56, and U/A showing evidence of UTI. Patient was given IVF, Rocephin and Vancomycin. Blood cultures were positive for gram + cocci (enterococci). Due to persistent fevers, and worsening back pain, MRI of T and L spine were completed, which showed concern of an epidural abscess in the L3-L4, and early signs of discitis/OM in L3-L5.

Discussion: Batson's plexus, a network of valve-less veins that are bi-directional, can cause retrograde spread of infection and malignancy from the pelvic organs to the vertebrae. This network drains the inferior end of the bladder, breasts, and prostate into the intra-spinal veins. Hence, this is the predominate route for metastasis of breast and prostate cancer. This plexus eventually connects to the azygous vein, which drains into the thoracic cavity, and can lead to lung infections/malignancy and even endocarditis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 148

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Dumping Syndrome 18 Years After Partial Gastrectomy

Introduction: Dumping syndrome is a known gastric surgery complication with variable time to onset, in one large study, median onset was 2.7 (1.0–14.8) years. It is mostly described post Roux-en-Y bypass surgery. In this case, we describe delayed presentation of dumping syndrome 18 years following partial gastrectomy.

Case description: 79-year-old male with history of esophageal cancer status post esophagectomy and partial gastrectomy 18 years ago, follicular thyroid cancer, colon cancer and heavy alcohol use presented with persistent hypoglycemia. He had two separate admissions for severe hypoglycemia resulting in seizure, and motor vehicle accident. Extensive laboratory and radiologic work up including cortisol, insulin, pro-insulin, C-peptide levels and CT abdomen were all negative for insulinoma and other causes including MEN 1. At that point, it was thought that his hypoglycemia due to his alcohol intake, however it was postprandial rather than the typical fasting alcohol-induced hypoglycemia. Furthermore, it didn't improve with self-reported decreased alcohol consumption. Eventually, this was thought to be delayed presentation of dumping syndrome given the postprandial timing. Taking Acarbose would've been possibly therapeutic, but patient declined it and wished to re-attempt dietary modifications.

Discussion: Our patient had extremely delayed presentation favoring other etiologies. Despite optimizing his care with dietary modification and reduced alcohol consumption, his hypoglycemia didn't fully resolve pointing to significantly delayed dumping syndrome.

Clinical significance: Hypoglycemia could be a life-threatening condition, knowledge of the potential delayed presentation of dumping syndrome would lead to early diagnosis and intervention if clinicians have high clinical suspicion.

Poster Presentation No. 149

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A Rare Case of Unexplained High Fever, Rash and Thrombocytopenia

33-year-old female with recurrent history of self-resolving skin rash, polyarthralgia, lymphadenopathy presented with fever, chills, worsening fatigue, myalgia, sore throat, skin rash, polyarthralgia of 3 weeks duration following a recent travel to Hawaii. On evaluation she was febrile, tachycardic, tachypneic and hypotensive. Exam revealed non-tender anterior cervical lymphadenopathy, hepatosplenomegaly and a non-raised, blanching, diffusely scattered maculopapular rash. Initial work up was remarkable for lactic acidosis, leukocytosis, anemia, thrombocytopenia and imaging confirmed moderate hepatosplenomegaly. However, CMP, pan culture, chest x-ray were unremarkable. Infectious workup including ASO, influenza, EBV, CMV, Parvovirus, Dengue, HIV, comprehensive viral panel were negative. LDH, D-dimer were elevated, fibrinogen level was low but PT, PTT, absolute reticulocyte count, ADAMTS 13 were WNL. Direct coombs test was negative. Peripheral smear showed no atypical cells or schistocytes. Rheumatology workup revealed elevated ESR/CRP, negative ANA, RA, CCP, cryoglobulin, ANCA, MPO, PR3 but significantly elevated ferritin. BMB showed rare hemophagocytic histiocytes. Further work up for Hemophagocytic Lymphohistiocytosis (HLH) showed absent NK cell activity, low sCD25 level but absent genetic testing for PRF, STX11, SH2D1A, BIRC4 mutations, flow cytometry for cell surface expression of perforins, granzymes-b proteins. Work up for malignancy was negative. She met diagnostic criteria for HLH and adult onset Stills disease. Hence was treated with rituximab for HLH secondary to AOSD with appropriate response. HLH is a rare and under-diagnosed clinical syndrome and is rapidly fatal if not diagnosed and managed timely. Early diagnosis and prompt aggressive treatment are vital for patient's survival and favorable outcome.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 150

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Latent Tuberculosis, What a Menace!

Introduction

9,272 new cases of active tuberculosis (TB) were noted in the United States in 2016; 68.5% of these occurred among non-US born persons. The goal of elimination of TB in this country could be achieved by increasing efforts to identify and treat latent TB infection (LTBI) amongst the high-risk population. Currently, the treatment for LTBI is nonmandatory.

The case

A 33-year-old male immigrant from the Philippines initially presented to the outpatient clinic with a 4-week history of headache and neck pain. He was diagnosed with tension headache and treated with supportive measures. The patient had a known history of untreated LTBI. Two weeks later, the patient presented to the emergency department with headache and altered mental status. His blood work was notable for moderate hyponatremia, lumbar puncture showed lymphocytic pleocytosis, low glucose and high protein. Initial cerebrospinal fluid cultures were negative. MRI of the brain showed diffuse nodular leptomeningeal enhancement of the thalamus and midbrain. Given high clinical suspicion, the patient was treated empirically for presumed TB meningitis, which was later confirmed by TB PCR. Patient's condition gradually improved thereafter.

Discussion

13 million people in the US have LTBI; 10% of untreated people will eventually develop active disease, leading to significant morbidity, mortality and health care costs. Given the current strategy of nonmandatory treatment of LTBI, providing comprehensive education and treatment to immigrant patients becomes crucial. Accurate documentation of untreated LTBI and heightened suspicion for a tuberculous etiology in such patients presenting with seemingly common symptomatology are vital.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 151

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Daptomycin-Induced Eosinophilic Pneumonia: An Interesting Case Report

Eosinophilic pneumonia has a broad differential, including medications as antibiotics and NSAIDs, hypersensitivity syndromes as allergic pulmonary aspergillosis, vasculitis as Churg-Strauss, and infection. We present an interesting case of daptomycin-induced eosinophilic pneumonia.

Case description:

A 79 year-old man who was recently hospitalized for MRSA endocarditis, presented with worsening shortness of breath for the past three days.

Three weeks prior, he was started on 6 weeks course of daptomycin given allergy to vancomycin.

On presentation, he was febrile, tachycardic, tachypneic and hypoxic requiring 5L of oxygen. Physical exam was notable for moderate respiratory distress and diffuse crackles bilaterally.

Labs were significant for leukocytosis of 13,000 cells/UL with 10% eosinophils, and elevated creatine kinase level of 1500 U/L.

Chest X ray showed new bilateral patchy opacities, and CT chest demonstrated multifocal consolidation surrounded by ground-glass opacities with moderate adenopathy.

Vasculitis and infection etiology were ruled out after extensive workup. Bronchoscope with bronchoalveolar lavage (BAL) was significant for eosinophil count of 27% (reference range <5%).

Daptomycin was suspected to be the causative agent. It was discontinued and linezolid was started instead. The patient's respiratory symptoms improved, and a repeat chest x ray one week later showed complete clearing of bilateral consolidation, with normalization of creatine kinase level (170 U/L) and peripheral eosinophil count.

Discussion:

Eosinophilic pneumonia usually presents with fever, hypoxia, new lung infiltrates with either peripheral eosinophilia or pulmonary eosinophilia via BAL or biopsy >25%. Early recognition of drug-induced eosinophilic pneumonia and withdrawal of the offending agent are critical to management.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 152

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Rare Cause of Cramps in Cirrhotic Patient

Background There is an increased prevalence of chronic muscle cramps in patients with cirrhosis; cause is incompletely understood. Rifaximin, used for hepatic encephalopathy prophylaxis, also causes muscle cramps, rarely associated CPK elevation.

Case presentation A 27-year-old African American female with Liver Cirrhosis presented with severe generalized muscle cramps for a few days, especially in hands, abdomen and legs. She had a similar episode 1 month ago, managed at a different facility. PMH was significant for autoimmune hepatitis diagnosed twenty years, cirrhosis, s/p TIPS and recurrent hepatic encephalopathy on Lactulose/Rifaximin maintenance therapy . On presentation she was in severe pain, with tachycardia, mild ascites, muscle soreness without weakness. No asterixis seen. Labs showed elevated lactic acid, creatinine 1.46, negative UDS,UA with 3+ blood but no RBCs, positive urine myoglobin and CK of 5866. Patient was treated for rhabdomyolysis with intravenous fluids and analgesia. Her diuretics were held.. Despite hydration, patient continued to have severe cramps with muscle soreness and the next day the CK was 7105. At this stage Rifaximin was discontinued. The very next day, the muscle cramps improved and CK was down to 473. Patient was asymptomatic at the time discharged and was instructed not to take rifaximin.

Conclusion: The link between patients with liver cirrhosis and rhabdomyolysis while being treated with Rifaximin has been documented in the past, but it may not be readily recognized. Muscle cramps in cirrhotics on Rifaximin should not be presumed to be due to their liver disease and CK levels should be checked

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 153

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Non-Bacterial Thrombotic Endocarditis: Raiding Clinical Awareness

INTRODUCTION

Nonbacterial thrombotic endocarditis (NBTE) refers to a spectrum of noninfectious lesions of the heart valves. NBTE is seen in between 0.9 to 1.6% of all adults at autopsy, but is more commonly seen in advanced malignancies and with lupus. Most vegetations are clinically silent; however, patients may present with systemic embolization and require treatment.

CASE

A 79-year-old gentleman with mesothelioma, HTN, DM, and hyperlipidemia presents to the hospital with two weeks of progressive confusion and RUE weakness. The family also noted an intermittent low grade fever with night sweats. Admitting vital signs were unremarkable. Right arm weakness was noted. MRI of the brain demonstrated bilateral scattered areas of acute infarcts consistent with an embolic source. CTA of the brain and neck did not demonstrate any critical stenosis. ANA and antiphospholipid antibody titers were elevated. TEE demonstrated a highly mobile 1.64 x 0.35cm mass at the base of the posterior mitral leaflet. Repetitive blood cultures were negative. Antibiotics were discontinued. Patient underwent mitral valve repair and resection of the vegetation. Cultures of the vegetation were negative.

DISCUSSION

Treatment of NBTE usually consists of systemic anticoagulation and treatment of the underlying condition. Surgery is considered in cases of persistent embolization and good overall prognosis. In patients with NBTE, treatment with therapeutic dose low molecular weight heparin or unfractionated heparin is preferred over no anticoagulation or warfarin. We continued patient's anticoagulation indefinitely due to the high risk of recurrent systemic embolization. Generally, the prognosis from NBTE is poor.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 154

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Concurrent Diagnosis of Myasthenia Gravis and Chronic Lymphocytic Leukemia: Coincidence or Paraneoplastic Syndrome?

INTRODUCTION

Chronic lymphocytic leukemia (CLL) is the most common leukemia in adults with an incidence of 4 /100,000. Myasthenia gravis (MG) is a rare autoimmune disease associated with thymoma. Autoimmune cytopenias are often associated with CLL. Non-hematological autoimmune diseases, although rare, have been reported with CLL including MG and may be considered a paraneoplastic syndrome.

CASE

A 65-year-old man presented three month of worsening ptosis, diplopia and weakness. His lab revealed elevated acetylcholinesterase receptor antibodies of 48 nmol/L (Normal: <0.4 nmol/L). His CBC showed leukocytosis of 19000 / μ L; lymphocytes of 14000 / μ L; hemoglobin of 15 g/dL and platelets 196,000 / μ L. Peripheral smear showed smudge cells with predominantly small lymphocytes with clumped nuclear chromatin. There was no evidence of hemolysis. Flow cytometry identified kappa monotypic B cells expressing CD5, CD19, CD20, CD22, CD23, CD45, CD79b. A diagnosis of concurrent CLL and MG was made. CLL gene expression and IgVH mutational status showed >1 with 100% homology and ZAP70 positive. FISH did not reveal any abnormality. Patient was staged as Rai 1/Binet B. His CLL is under surveillance. His myesthenia responded well to IVIG, oral corticosteroids and pyridostigmine.

DISCUSSION

The synchronous association between MG and CLL suggests that MG can be autoimmune complication or paraneoplastic syndrome of CLL. The proposed mechanisms are regulatory T cell failure, autoantibody expression by CLL cells, and multiple somatic and inherited mutations. Further insight into this can have therapeutic and prognostic implications. Physicians should suspect this association in patients with myasthenic symptoms and leukocytosis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 155

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Don't Attribute Chronic Kidney Disease to Hypertension Alone: Finding IgG-4 Related Disease, a Newly Described Entity

INTRODUCTION

IgG-4 related immune mediated disease is a recently recognized condition characterized by lymphoplasmacytic infiltration of IgG4-positive plasma cells and fibrosis of multiple organs. The incidence is unknown, but reported cases usually involve middle-aged and older men and may be associated with malignancy. Early diagnosis is imperative since treatment with immunosuppression suppresses loss of renal function. Our patient's well controlled blood pressure could not be the cause of his rapid decline in renal function. A search for additional causes of his loss of renal function was indicated.

CASE PRESENTATION

A 73-year-old man, with thyroid carcinoma s/p thyroidectomy and hypertension was found to have a gradual rise in his serum creatinine from 1.29 to 3.5 mg/dl over a year. He was referred to nephrology. His creatinine continued to rise. No urinary retention was identified. His UA was benign. Prerenal azotemia was excluded. He had low C3 and C4 levels. IgG-4 was elevated at 816 mg/dl. Renal biopsy demonstrated globally sclerotic glomeruli with severe interstitial fibrosis and tubular atrophy. There was moderate lymphoplasmacytic infiltrate with increased eosinophils. Patient was diagnosed with sclerosing tubulointerstitial nephritis, consistent with IgG4-related disease. Patient was started on steroid therapy. His renal function improved over the next few weeks.

DISCUSSION

IgG-4 related immune mediated disease is a newly described entity, with poorly understood physiology and pathogenesis. The incidence is unknown. Reported cases describe middle aged to older men. There may be a relationship to malignancies. Early recognition and treatment with steroid therapy has good outcomes.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 156

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Goodpasture's Disease: A Rare Disease with an Unusual Presentation

INTRODUCTION

Goodpasture's (GP), or Anti-GBM disease, is an autoimmune syndrome with rapidly progressive glomerulonephritis with or without pulmonary hemorrhage. The incidence is 1 case/million annually. Diagnosis is confirmed when linear IgG is demonstrated along the glomerular basement membrane (GBM) on renal biopsy. We present a case GP disease with linear IgA deposits along GBM and c-ANCA positivity.

CASE

A 78-year-old lady with JAK-2 mutation positive chronic myeloproliferative disorder, presents with non-pruritic bilateral lower extremity rash and hemoptysis. Lab data revealed elevated serum creatinine, hematuria and proteinuria. Skin biopsy demonstrated leukocytoclastic vasculitis. One year earlier her CT scan demonstrated multiple pulmonary cavitory lesions. She complained of sinus. Her c-ANCA was 1:320. Wegener's granulomatosis was suspected. MRSA was demonstrated on nasal swabs. After a course of trimethoprim sulfamethoxazole she improved. Recently, her IgG-GBM antibodies were negative and c-ANCA titers were 1:80. Wegener's Granulomatosis was suspected. Patient was treated with prednisone. Her renal function deteriorated despite of being on steroids. Subsequent renal biopsy demonstrated linear IgA deposits along glomerular capillary walls. Despite plasmapheresis and immunosuppressive regimen, disease progressed to ESRD.

Discussion:

Incidence of double positive GP cases of IgA related and c-ANCA is very rare. Most patients are in renal failure at the time of diagnosis. In spite of classical triple regimen used in IgG-mediated GP (plasma exchange, steroids and cyclophosphamide) the renal prognosis is poor. The diversity of recognized antigens by anti-GBM highlights the importance of renal biopsy for diagnosis because conventional serologic immunoassays may yield false negative results.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 157

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Chasing Pancreatic Cancer

INTRODUCTION:

Approximately 5% of patients with pancreatic cancer (PC) have a positive family history for the disease. The suspicion for familial pancreatic cancer (FPC) increases when at least a pair of first-degree relatives (FDR) is diagnosed with PC in the absence of other known genetic susceptibility syndromes. We present a patient with pancreatic cancer who met the criteria for FPC and may have benefited from screening.

CASE PRESENTATION:

This is a 65-year-old male who presented to the ED with complaints of excessive weight loss, fatigue and jaundice for the past three weeks. Social history was significant for smoking while family history was significant for two brothers that died of pancreatic cancer at age 60 and 65. Laboratory data showed (Units/L), lipase 377 and ALP 828. CT of the abdomen revealed a mass at the head of the pancreas with innumerable liver enhancing lesions and positive pulmonary lymph nodes. CA 19-9 was elevated at >20,000. A presumptive diagnosis of metastatic pancreatic cancer was made. The final confirmatory histological diagnosis could not be obtained as the patient refused a tissue biopsy.

DISCUSSION:

A prospective analysis from a PC registry has shown that individuals with first-degree relatives affected by PC had an 18-fold higher risk of developing PC. The American College of Gastroenterology recommends screening of FDR from a FPC family with at least two affected FDR. Our patient was never offered such screening. We did recommend screening for his 3 remaining living siblings that could be affected by this disease.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 158

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Persistent Sciatic Artery: A Rare Congenital Anomaly that Mimicks Peripheral Vascular Disease

INTRODUCTION

The sciatic artery degenerates after the 3rd month of embryonic development; however, in 0.03-0.05% of adults, the Sciatic Artery persists (PSA) and can present with symptoms of peripheral artery occlusive disease (PVOD); aneurysms formation, distal embolization or mechanical compression of local structures.

CASE

A 52-year-old lady with diabetes, hypertension, and hyperlipidemia presented with a right foot infection and was admitted for outpatient treatment failure. IV antibiotics were started, and she underwent a right great toe amputation for osteomyelitis. Arterial Doppler exam demonstrated a 50% stenosis of the femoral artery. An aortogram with lower extremity runoff showed patent femoral arteries, but, large caliber, bilateral PSA which continued as the popliteal artery and supplied to the entirety of the infra-popliteal system. This was confirmed by CT angiography with 3D reconstruction. No intervention was deemed necessary.

DISCUSSION

PSA can present with various complications--aneurysm formation, thrombosis, distal embolization and acute limb ischemia. This can lead to symptoms of claudication and acute limb ischemia from local thrombosis of PSA or distal embolization. An aneurysm can cause sciatic neuralgia from mechanical compression of local structures. Arterial doppler may measure the PSA flow instead of femoral artery flow. In our case, the patient did not have any aneurysm, thrombosis or embolization but she presented with non-healing lower extremity wound likely from poor perfusion.

CONCLUSION

PSA is a rare vascular anomaly that presents with symptoms of the peripheral vascular disease. It should be suspected in individuals with no risk factors for PVOD but signs of claudication.

Poster Presentation No. 159

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A Hidden Cause for Recurrent Diarrhea

INTRODUCTION

Clostridium difficile infection (CDI) has become a common cause of recurrent diarrhea. CDI is a financial and personal burden due to its rising prevalence and incidence. From 2001 to 2012, annual incidence has increased by 189 percent. Patients with recurrent CDI are often empirically treated with metronidazole or vancomycin. Microscopic colitis is another cause of persistent inflammatory and watery diarrhea, which has an increasing incidence; associated with use of non-steroidal anti-inflammatory drugs and proton-pump inhibitors (PPI). We present a patient with recurrent CDI who was eventually diagnosed with microscopic colitis.

CASE

A 41-year-old male with a history of DM-1, ESRD, and GERD presented with persistent diarrhea for the past 5 years. Initial stool testing was negative for CDI. Inflammatory bowel disease and celiac disease were excluded with endoscopic biopsy. Subsequent stool testing did demonstrate CDI. Treatment with metronidazole was initiated and PPI treatment was discontinued. He had a relapse of CDI a few weeks later and was treated with oral vancomycin. Two months later, he presented again with the same symptoms. He was treated empirically for CDI with minimal to no improvement of his symptoms. Stool studies were negative for clostridium difficile toxin. He underwent a repeat colonoscopy and biopsy, which showed lymphocytic infiltrates within the colonic mucosa confirming the diagnosis of microscopic colitis.

DISCUSSION

Patients with history of recurrent CDI may have other underlying etiologies for persistent diarrhea, as our case illustrates. Inappropriate antibiotic exposure may have resulted in increased resistance of his microbiome.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 160

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Scleroderma: Beyond the Classic Presentation

INTRODUCTION

Systemic scleroderma (SS) is an autoimmune disease characterized by widespread vascular dysfunction and progressive fibrosis of the skin and internal organs. The prevalence is 240 cases per 1 million adults. Our case demonstrates an unusual GI complication of systemic scleroderma --ascites-- and highlights the importance of a thorough history and skin exam on initial presentation.

CASE

A 51-year- old male presented with two months of progressive weight loss, fatigue, nausea and ascites. He had a history of vitiligo, rheumatoid arthritis and GERD. Physical exam revealed scattered patches of depigmented skin, abdominal distention, ankles edema, no JVD or stigmata of chronic liver disease. Two large volume paracentesis were performed with SAAG <1.1. Cytology and cultures were negative. In light of newly diagnosed small bowel obstruction patient underwent exploratory laparotomy that revealed midgut volvulus. Ileus persisted postoperatively and TPN was started. Serologic markers were inconclusive but the patient had tight skin over hands and face, contractures of fingers, digital ischemic ulcers over fingertips and severe Raynaud's phenomenon. A clinical diagnosis of scleroderma was made. Months after the diagnosis the patient remained on TPN due to severe ileus.

DISCUSSION

Scleroderma is notoriously known for the esophageal involvement. Lower gastrointestinal symptoms such as malabsorption and pseudo-obstruction have been reported. It is unique for SS to present with massive ascites. The mechanism remains unclear, but is likely due to hypoalbuminemia caused by malabsorption. Laparotomy worsened the hypomotility and could have been avoided if diagnosis of scleroderma had been entertained prior to surgery.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 161

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Percutaneous Use of the AngioVac System in Endocarditis Patient Who is a Poor Surgical Candidate

INTRODUCTION

AngioVac is a suction thrombectomy device approved for percutaneous removal of clots or tumors from the intravascular system. We describe a patient with tricuspid valve endocarditis and multiple pulmonary emboli who was not a surgical candidate. He successfully underwent resection of a large tricuspid valve vegetation using the AngioVac system.

CASE

A 45-year-old intravenous heroin abusing man presented with dyspnea. A Chest CT revealed multiple infiltrates consistent with septic emboli. A transthoracic echocardiogram demonstrated a 5.5cm tricuspid valve vegetation. Blood cultures remained positive for MSSA despite escalating antibiotics to daptomycin and nafcillin. Considering the size of the vegetation and persistent bacteremia, surgery was contemplated. The patient was deemed a poor surgical candidate due to his hemodynamic instability and underlying multiple comorbidities. AngioVac suction of the vegetation was offered to the family. The patient tolerated the procedure well. Repeat blood cultures were negative. Clinically he improved and was transferred to the LTAC facility.

DISCUSSION

The tricuspid valve is involved in 10-25% of all cases of endocarditis. Antibiotics remain the cornerstone of treatment. Surgical intervention may be indicated for 1) persistent bacteremia 2) recurrent embolization despite appropriate antibiotics, 3) large vegetations (more than 20 mm) or 4) refractory congestive heart failure. Due to the patient's poor nutritional status, respiratory failure due to multiple septic emboli and sepsis, he was deemed an unsuitable candidate for open cardiac surgery.

CONCLUSION

The use of the novel AngioVac system may be considered for tricuspid vegetation resection in endocarditis patients who are poor surgical candidates.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 162

Presenter: Abdul Aleem

Additional Authors: Zahra'a Salah, MD; Nabil Sultan, MD; David Steinberger, MD

Institution: St. Mary Mercy Hospital – Livonia

Program Director: David Steinberger, MD, FACP

Massive Fatal Intraperitoneal Bleeding from Gastrohepatic Ligament Following PEG Tube Placement: An Extremely Rare Complication

Placement of a percutaneous endoscopic gastrostomy (PEG) tube has been one of the common and safe procedure. Immediate mortality after the procedure is less than 1%. We present an extremely rare case of massive immediate post-PEG placement intraperitoneal bleeding resulted in hemodynamic compromise and ultimately death of the patient.

An 84-year-old male presented with seizure, pneumonia, and dysphagia. He failed bedside swallow evaluation and had signs of aspiration of videofluoroscopic swallow study. The family decided for PEG tube placement for feeding, that was placed in the first attempt by an experienced gastroenterologist without any apparent complication. After 5 hours, the patient was found to be unresponsive and pulseless. Resuscitation was started immediately, got spontaneous circulation in 4-5 min, transferred to MICU. Vitals: BP 53/32, HR 122, Temp 98.1. He was started on vasopressors. Labs showed a significant drop in hemoglobin (10.6-6.3). The FAST exam showed massive fluid in the intraperitoneal cavity. Repeated EGD did not show any sign of bleeding in the stomach. He was sent to operation room for emergent laparotomy. Active bleeding from gastrohepatic ligament was found. About 1400 ml of blood was drained. The source of bleeding was controlled and was sent back to MICU. In spite of multiple blood transfusion, he could not survive and was pronounced dead.

We report the first case of immediate massive bleeding from gastrohepatic ligament. Rapid diagnosis and surgical intervention is critical. Physicians should be careful and mindful of this unusual complication.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 163

Presenter: Soney Basnyat

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Pigmented Purpuric Dermatitis: A Case Report of an Unusual yet a Benign Cutaneous Lesion

Introduction: Pigmented Purpuric Dermatitis (PPD) includes a group of vascular diseases that present with pruritic or non-pruritic macules and petechiae. Skin lesions are characteristically non-blanchable and non-palpable, mistaken as vasculitis. Identification of clinical features of PPD and early consideration of skin biopsy can prevent extensive workup for vasculitis or malignancy.

Case Presentation: An 80-year-old Caucasian male presented with sudden onset of red-brown rashes in bilateral lower extremity extending from foot to the knees. Rashes were initially red in color with gradual brownish discoloration. Skin lesions were pin point to large purpuric patches in size. They were non-pruritic, non-blanchable and non-palpable. History was unremarkable for acute infection, bleeding tendency, medication use, joint pain and other rashes. Examination was otherwise unremarkable. Laboratory work up including inflammatory markers, platelet count, coagulation profile were normal. Skin biopsy revealed findings consistent with PPD described as perivascular predominantly lymphocytic inflammatory infiltrate in the underlying dermis with extravasation of erythrocytes. Our patient responded to treatment with topical triamcinolone and vitamin C.

Discussion: PPD are cutaneous eruptions that present with asymptomatic or pruritic macules and petechiae with red-brown pigmentation. Histology demonstrates characteristic features as seen in our patient along with signs of endothelial cell swelling, narrowing of lumen, hemosiderin deposition in macrophages. Differential diagnoses include thrombocytopenia, small- vessel vasculitis, contact dermatitis and cutaneous T-cell lymphoma. Identification of clinical features of PPD and early skin biopsy can prevent extensive workup for vasculitis or malignancy like Cutaneous T-cell lymphoma which in its early stages may closely mimic PPD clinically.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 164

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A Case of Imported Pulmonary Coccidioidomycosis

Introduction: *Coccidioides* is a pathogenic fungus endemic to desert areas of the southwestern U.S. Determining a history of exposure is critical for determining diagnosis of coccidioidomycosis, especially in uncommon areas such as Michigan.

Case: An 84-year-old Vietnamese male with history of persistent atrial fibrillation (on warfarin), asthma, and recent hospitalization for community-acquired pneumonia presented with altered mental status and weakness for 10 hours. He had a witnessed seizure upon arrival to the medicine floors. He had recently moved from Arizona to Michigan to live with his daughter. Physical exam was remarkable for expiratory wheezes with left upper and lower extremity weakness (3/5 strength). WBC count on admission was 12.3 k/uL, lactic acid 8, creatinine 2.36, and INR 4.3. Blood cultures and urinalysis were negative. Sputum culture grew *Candida*. CT of the head and MRI of the brain showed no acute infarcts or intracranial masses. EEG was negative for seizures. Chest x-ray showed a 3x3.3cm right lower lobe airspace opacity and a nodular opacity over the left midlung. Chest CT showed a 3x2.6cm consolidated airspace opacity in the right lower lobe with a nodular opacity with spiculated margins in the left upper lobe, measuring 3x1.4x2.7cm. Bronchoscopy and brush cytology were negative for malignant cells. Culture of bronchial washings grew *Coccidioides immitis/posadasii*. IgM antibody to the Immunodiffusion Tube Precipitin antigen was detected demonstrating coccidioides infection.

Conclusions: The purpose of this case is to increase awareness in hospitalists of this disease in non-endemic areas. Its recognition is critical to prevent a delayed diagnosis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 165

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An Adenocarcinoma in Carcinoid's Clothing: Appendiceal Goblet Cell Tumor

Introduction: While gastrointestinal carcinoid tumors are usually not very aggressive, goblet cell tumors are a rare variant that are seen almost exclusively in the appendix and are usually diagnosed at advanced stages. These tumors behave more similarly to adenocarcinomas rather than typical carcinoid tumors.

Case Presentation: We present a 41 year old female who had an appendectomy for appendicitis with perforation and an abscess who was incidentally found to have T2N0M0 goblet cell carcinoid on pathology review. Initial margins were positive so patient underwent a laparotomy with a prophylactic right hemicolectomy, bilateral oophorectomy, omentectomy and biopsy of multiple lymph nodes, which all came back negative. Patient was chose not to have chemotherapy after being informed of risks and benefits and is currently being monitored in remission.

Discussion: While being formally categorized as a neuroendocrine tumor, goblet cell carcinoid tumors are a rare variant that behave more similarly to ovarian adenocarcinomas, presenting as more indolent diseases with similar modes of dissemination and survival outcomes. Goblet cell carcinoid tumors also tend to have CA 125 as a tumor marker instead of typical carcinoid tumor markers. In these patients compared to regular carcinoid, chemotherapy is much more commonly used with great efficacy. Goblet cell carcinoid tumors are a very aggressive type of carcinoid tumors and should be treated aggressively. Early prophylactic oophorectomy, right hemicolectomy and omentectomy should be heavily considered in patients diagnosed with goblet cell carcinoid tumors.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 166

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Novel Treatment Therapy for Delayed Post-Hypoxic Leukoencephalopathy Due to Recreational Drug Overdose

Introduction: Delayed post-hypoxic leukoencephalopathy (DPHL) is a rare condition that follows an anoxic brain injury, due to carbon monoxide and recreational drug overdose, among other causes. A lucid period follows for one to three weeks with an abrupt onset of neuropsychiatric symptoms often mistaken as primary psychotic illness.

Case description: A 28-year-old female with a history of IV drug use presented to the hospital with agitation after a recent respiratory arrest from a recreational drug overdose. She was doing well at home for 2-3 weeks after the event with only short-term memory loss. When she presented, she had acute onset agitation with paranoia, hallucinations, delusions, minimal sleep requirements and depressed affect. A complete workup for infectious causes was negative. Arylsulfatase-A level was normal. MRI demonstrated a symmetric abnormal hyperintense T2 signal abnormality involving the bilateral caudate nuclei, anterior lentiform nuclei and globus pallidus compatible with leukoencephalopathy. EEG was within normal limits. Several medications were trialed without relief of symptoms, including levetiracetam, topiramate, olanzapine, and trazodone. A regimen of quetiapine with lorazepam was effective, in addition to propranolol. Upon discharge, she had significantly decreased agitation.

Discussion: Our patient had the classical presentation of DPHL following a recreational drug overdose with classic hyperintensity on MRI imaging. Our patient did not have pseudodeficiency of arylsulfatase-A, although this is not always present. The literature does not discuss recommended treatment therapies which have shown efficacy in managing a patient's neuropsychiatric symptoms. Therefore, this case report will add to the literature already present on DPHL.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 167

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Unusual Presentation of Langerhan Cell Histiocytosis in an Adult Female

Introduction: Langerhan cell histiocytosis (LCH) is a proliferative disease of histiocyte like cells that generally affects children. It usually involves bones but can be multisystem disease. Its incidence in adults is 1-2 cases per million.

Case Report: We report a case of 24 years old Caucasian female who noticed a lesion in her right vulvar area associated with vaginal irritation, discharge and pain. She was initially treated with antibiotics with no improvement in symptoms. Due to worsening symptoms, she underwent urogynecologic evaluation, work up was negative for Bacterial vaginosis, Trichomonas vaginalis, Chlamydia/Gonorrhea, yeast culture and HSV1/2. She finally underwent partial vulvectomy, surgical pathology revealed Langerhan cell histiocytosis based on strong and diffusely positive staining for S-100, CD-4 and CD-1a. BRAF (V600E) mutation was positive. Repeat biopsy at Cleveland clinic showed same results. She underwent series of lab evaluations including basic work up, liver function test, thyroid function test, Hep B, C and HIV, all of which were unremarkable. MRI brain was normal, however she developed diabetes insipidus due to pituitary involvement. Treatment is started with cytarabine IV daily for 5 days with plans to repeat cycle every 28 days for total 1 year. Recent skeletal survey showed osteolytic lesion in bilateral distal femur. Options in the future if she were to fail cytarabine, include vinblastine and prednisone, etoposide or BRAF inhibitors.

Discussion: Langerhan cell histiocytosis is a rare disease in adults. It can be misdiagnosed easily and can also pose therapeutic challenge. Further studies are needed to guide therapy.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 168

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Time Out for Type and Screen?

Background: Hemorrhagic complications after cardiac catheterization (CC) are associated with an increased risk of mortality. While a standardized protocol for obtaining a blood type and antibody screen (T&S) exists for most surgical procedures at our institution, none exist for medical procedures. There is evidence from the perioperative literature to suggest that routine pre-operative T&S may be unnecessary in surgical procedures with rates of transfusion of less than 5%. Our goal was to evaluate the current practice of obtaining routine T&S prior to inpatient CC.

Methods: A retrospective chart review was completed of 331 hospitalized patients who underwent 362 consecutive left heart catheterizations from October 2016 through April 2017 at an academic medical center.

Results: A T&S was active (drawn within 72-hours) in 180 of 362 (49.7%) inpatient CC cases. There were 19 total patients that required a blood transfusion within 72-hours of CC. Ten of those 19 patients had an active T&S at the time of catheterization. Additionally, there were nine bleeding complications directly related to CC requiring transfusion out of 362 (2.5%) procedures.

Conclusions: In the current practice of ordering T&S prior to inpatient CC, less than half of the patients had an active T&S prior to CC and there was no clinical benefit for patients with a pre-procedure active T&S. Given the relatively low risk of bleeding complications and the ability to rapidly complete a T&S and prepare emergency blood products, protocolized ordering of T&S on all patients prior to inpatient CC should not be recommended.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 169

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A Rare Case of Cardiac Osteosarcoma Presenting with Hypertensive Emergency and Heart Murmur

Introduction: Primary cardiac tumors are very rare, with an incidence of 0.3-0.7% of all cardiac tumors. Only 25% are malignant, and, of these, 75% are sarcomas. Angiosarcomas are the most common sarcomas of the heart, while osteosarcomas are extremely rare and carry a poor prognosis.

Case Description: A 41-year-old man presented with three weeks of progressive headache. Initial BP was 206/140 and a heart murmur was heard. A drug screen was positive for cocaine. TTE showed a large right atrial mass and subsequent TEE showed a heterogeneous mass measuring 5.6 x 4.6 cm attached to the right atrial appendage, lateral tricuspid valve annulus and possibly right ventricle. Severe functional stenosis of the tricuspid valve was noted. Cardiac MRI was concerning for angiosarcoma vs lymphoma. CT C/A/P showed no evidence of metastatic disease. He underwent debulking surgery secondary to hemodynamic TV stenosis. Pathology demonstrated extraskelatal fibroblastic osteosarcoma. He was referred to oncology and started chemotherapy consisting of Adriamycin and Olaratumab.

Discussion: This case demonstrates the wide variation of presentation and histology of cardiac tumors. Symptoms are generally dependent upon tumor location and size rather than histology. Cardiac tumors can be discovered during workup of separate problems or physical exam findings. Early diagnosis is critical, as without surgical resection the survival rate of patients with malignant primary cardiac tumors is only 10% at 9 to 12 months. Cardiac tumors should be managed at surgical centers with experience treating cardiac tumors as combined treatment with systemic chemotherapy and surgery can prolong survival.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 170

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Positive Effect of B Blockers on Length of Stay in Patients Hospitalized for Acute Exacerbation of COPD

Background: Hypertension is the most common co-morbidity associated with COPD, with a prevalence of 35-45%. Beta blockers are commonly used drugs in hypertensive patients. We studied the effect of hypertension and B blockers on the length of stay in admitted COPD patients.

Methods: We conducted a retrospective study in patients admitted for management of acute exacerbation of COPD from January 2012 to October 2012. We analyzed data on demographics, co-morbidities, medication list and length of stay. Mean length of stay was compared using the Student's t-test. Multiple linear regression analysis was employed to assess the effect of other co-morbidities.

Results: 537 patients (mean age 67.8 ± 16.4 years, 55% females) were studied. Hypertensive COPD patients had significantly reduced mean length of stay as compared to non-hypertensives [2.9 days vs 4.5 days; $p < 0.05$]. After adjusting for other co-morbidities, the results remained significant. B blockers decreased the mean length of stay among hypertensives COPD [2.6 days vs 3.6 days; $p < 0.05$]. In addition, B blockers resulted in significant reduction of mean length of stay among overall COPD patients. (4.5 days vs 2.3 days; $p < 0.05$).

Conclusions: B blockers decreased the length of stay among hospitalized COPD patients regardless of the presence of hypertension or other cardiovascular co-morbidities. Recent studies have suggested the role of B blocker in reducing mortality and frequency of acute exacerbation in COPD patients with concurrent heart failure or hypertension. Thus, further studies are required to explore the full beneficial potential of B blockers in COPD patients.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 171

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Unusual Case of Rituximab-Induced Cardiomyopathy

Patient is a 47 year old gentleman with a history of ESRD secondary to granulomatosis with polyangiitis presenting with complaints of worsening shortness of breath and bilateral lower leg swelling. He completed a course of rituximab infusion 1 week prior to hospitalization. On examination, chest auscultation revealed bibasilar crackles followed by chest x-ray showing cardiomegaly, pulmonary congestion, as well as bilateral pleural effusion. Subsequently, echocardiogram showed reduced ejection fraction (EF) of 30-35%, global hypokinesis, and moderately dilated left ventricle. Echocardiogram 5 months ago showed normal left ventricular systolic function with EF of 55-60%. Cardiac catheterization findings showed patent coronary arteries. All other workup for secondary causes of non-ischemic cardiomyopathy were found negative (i.e. endocrine, hematologic, infectious, etc.).

The case portrays an unusual presentation of rituximab infusion side effects. One case reports a patient with sudden angina and diaphoresis immediately after infusion. Another reported a patient with stress-induced cardiomyopathy in less than an hour of administration. Arrhythmia such as atrial fibrillation have been reported within 1 hour of receiving rituximab. There are four reported cases of non-ischemic cardiomyopathy after infusion for treating non-Hodgkin's lymphoma. This is the first case reported for rituximab-induced cardiomyopathy in a receiving the infusion for GPA.

This case highlights the significance of rituximab and its potential fatal side effects. Majority of known adverse effects from the medication are immediate, but more awareness is needed as it can cause delayed reaction such as this patient who presented 1 week later.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 172

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Gemella Morbillorum in a Cryptogenic Brain Abscess

Introduction: A brain abscess is a devastating neurological disease, with high burden of neurological sequelae. After extensive evaluation, many abscesses remain cryptogenic. Identification of the causative organism is crucial in understanding the pathogenesis behind its formation and predisposing factors.

Case: We present a 28-year-old gentleman with no significant medical history who presented with tonic-clonic seizures and new-onset right-sided hemiparesis. Patient was afebrile, had no recent history of infection, or intravenous drug use. Examination did not reveal any signs of a localized oropharyngeal infection. Patient had a normal leukocyte count, normal C - reactive protein level and normal erythrocyte sedimentation rate. Brain imaging revealed a multiloculated enhancing lesion surrounded by vasogenic edema. IV corticosteroids and empiric broad-spectrum antibiotics, vancomycin, ceftriaxone, and metronidazole, were initiated. Trans-esophageal echocardiography revealed a large sinus venosus atrial septal defect. The abscess was drained via a frontal craniotomy; cultures grew *Gemella morbillorum* and *Peptostreptococcus*. Patient was discharged after 17 days, antibiotics were de-escalated to penicillin G and metronidazole for a total course of 6 weeks. On discharge, patient had complete resolution of the right-sided hemiparesis, and a normal neurological examination.

Discussion: We present a case of *G morbillorum* causing a cryptogenic brain abscess, a rare disease with an unusual presentation. *G morbillorum* is an anaerobic, Gram-positive coccus, commonly found as part of the normal flora of the oropharynx, gastrointestinal and female genital tracts. Underlying congenital heart diseases with right-to-left shunting, allows bacteria to bypass the pulmonary circulation and thus predispose to the formation of brain abscesses.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 173

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Hemophagocytic Lymphohistiocytosis as a Rare Cause of Pancytopenia in an Adult HIV Patient

Hemophagocytic lymphohistiocytosis (HLH) is a rare syndrome characterized by inappropriate activation of the immune response resulting in hemophagocytosis and has high mortality. Early diagnosis is key to reduce mortality, however, often difficult due to the wide variety of symptoms, especially in HIV patient with pancytopenia. It is another challenge in deciding when to initiate immunosuppressive treatment and the risks of its complications, as well as the secondary opportunistic infections triggering further hemophagocytosis.

This is a case of HLH in a 26-year-old man with a history of HIV on anti-retrovirals who presented with a sepsis-like picture initially thought to be secondary to a left arm abscess, that progressed to multiple organ dysfunction despite the use of continuous broad-spectrum antibiotics, and persistent transfusions for pancytopenia. Extensive work up for various infectious etiologies and malignancies were done with a bone marrow biopsy showing evidence of hemophagocytosis and myeloid hyperplasia with 30% polyclonal plasma cells that lead to the diagnosis of HLH. First line treatment with steroids and Etoposide started with an initial good response. However the course was later complicated by persistent infection and quickly deteriorated to multiorgan failure and demise.

Here we present a rare case of HLH in an adult HIV patient with pancytopenia. We discuss the critical components in the management of HLH, including early diagnosis, specific immunosuppressive treatment, and the treatment of underlying and secondary infections. This usually requires close monitoring, aggressive supportive care and careful discussions with multiple subspecialties involved in patient care.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 174

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A Rare Presentation of Mucormycosis with Painless Unilateral Vision Loss

Mucormycosis is a rare fungal infection classically associated with diabetic and immunocompromised patients. Here we describe a rare presentation of mucormycosis infection with painless unilateral vision loss in a patient recently treated for myelodysplastic syndrome (MDS).

A 60-year-old Albanian woman with a history of MDS status post BMT presented with a headache and painless loss of vision in the left eye. On examination she was alert and oriented but found to have loss of adduction of the left eye. Posterior ophthalmological examination revealed retinal edema with a flame-shaped infratemporal hemorrhage present. Head MRI was consistent with a severe infection of the paranasal sinuses. The patient was started on broad-spectrum intravenous (IV) antibiotics along with IV antifungals. On day 2 of admission she developed altered mentation and new onset right-sided hemiplegia. CT head revealed an ischemic infarct in the MCA territory. A biopsy of the maxillary and sphenoid sinus was performed, which revealed extensive necrotizing granulomas and microorganisms with hyphae consistent with Mucormycosis and Aspergillus, respectively. On day 5 she was found to have fixed and dilated pupils on exam. CT head showed complete infarction of the left cerebral hemisphere with a slight midline shift. The patient's family elected not to proceed with aggressive life saving measures and to proceed with comfort care. The patient passed away on the following day.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 175

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What Lies Beneath: A Unique Case of Otitis Externa Leading to Cerebellar Abscess

We present a case of a 60 year old female with Systemic Lupus Erythematosus, Hepatitis C, and breast cancer who presented with a ten day history of headache and ataxia. Two weeks prior, the patient presented to the emergency room with left ear pain. CT-Internal Auditory Canal at the time showed mastoid and middle ear effusions. The patient was diagnosed with acute otitis externa and discharged home with prednisolone and ofloxacin otic drops. Repeat CT this admission showed worsening left otomastoiditis with coalescence and extension to the petrous apex. MRI revealed a 3x3 cm ring enhancing mass in the left peripheral cerebellar hemisphere with evidence of midline shift and superior transtentorial herniation. Blood cultures were drawn and broad spectrum antibiotics started. The patient subsequently underwent transtemporal mastoidectomy and retrosigmoid abscess drainage by neurosurgery. Abscess tissue culture grew pan sensitive streptococcus pneumoniae. Targeted antibiotic therapy including moxifloxacin and amphotericin was continued for a total of six weeks. The patient's headache and ataxia resolved with antibiotics and abscess drainage. No evidence of abscess recurrence was found on repeat imaging. In developed countries, brain abscesses as a complication of otitis have decreased in frequency. However, otitis media and mastoiditis have been known to cause direct spread of organisms to the inferior temporal lobe and cerebellum. The most common pathogens include Streptococcus and Staphylococcus spp. This case highlights the importance of early recognition and evaluation for brain abscess in at risk populations.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 176

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A Rare Cause and Location of Deep Venous Thrombosis

A 41-year-old African American woman with a past medical history of uterine fibroids, with recent hydrothermal endometrial ablation, presented to our emergency room with left, lower quadrant and flank, pain of two days. Her pain was deep, 10/10 in severity, throbbing and burning, radiating to the umbilicus. She also endorsed fevers, chills, nausea and two episodes of vomiting. She denied any urinary symptoms.

On physical examination she had left sided costovertebral tenderness in addition to left lower quadrant tenderness. She was febrile, at 39.4 C, heart rate of 106/min, and blood pressure of 130/74. Blood work showed leukocytosis and microcytic anemia. The urinalysis was unremarkable. Patient was started on ceftriaxone and admitted for pyelonephritis.

Given the history of large uterine fibroids, the patient underwent computed tomography (CT) of abdomen and pelvis with contrast to evaluate for obstruction. There was no hydro nephrosis or ureteral obstruction, however, CT revealed multiple large fibroids and a dilated left ovarian vein likely due to proximal compression by large uterine fibroid mass. Partial thrombosis of the ovarian vein was also noted. Patient's antibiotics were switched to ampicillin-sulbactam and therapeutic anticoagulation with heparin was initiated for likely ovarian vein thrombophlebitis. Gynecology was consulted and agreed with therapeutic anticoagulation.

After stability, patient was discharged to follow with Gynecology for definitive management of her uterine fibroids.

Uterine fibroids as a risk factor for venous thromboembolism is rarely thought of, however, the implications for management and treatment are vital to reduce morbidity and mortality.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 177

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“I Woke Up with a Right Leg Weakness”- A Case of Cocaine Induced Cerebellar Stroke

Cocaine is the third most common substance of abuse and affects all body systems. Among the most severe complications of its use are seizures, hemorrhagic and ischemic strokes, myocardial infarction, aortic dissection, rhabdomyolysis, acute renal injury and multiple organ failure.

Our case involves a 28-year-old male presenting with sudden onset right lower extremity (RLE) weakness and numbness, which started hours after snorting cocaine. At presentation, vital signs showed hypotension, tachycardia, and normal respiratory rate. Neurological exam revealed finger-to-nose dysmetria ; 2/5 RLE strength, 3/5 left upper extremity strength; and decreased sensation to light touch on the RLE. CT head without contrast revealed a hypodensity in the left cerebellar hemisphere; subsequently, an MRI demonstrated a bilateral inferior cerebellar stroke. The patient had a concurrent acute kidney injury secondary to rhabdomyolysis and soft tissue infection of the neck. He was admitted to the ICU and initial treatment included initiating aspirin therapy, aggressive fluid resuscitations, and broad-spectrum antibiotics. The patient's condition improved and he was discharged to a rehabilitation center.

In cocaine users, the probability of stroke is up to 14 times greater than that in non-drug users. Cocaine use is associated with ischemic stroke through unique mechanisms, including reversible vasospasm, drug-induced arteritis, enhanced platelet aggregation, cardioembolism, and hypertensive surges. This case provides a classic example of cocaine-induced stroke and drug screening should be considered as a standard investigation in the initial evaluation of stroke, especially in younger age group.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 178

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Trapped: A Unique Presentation of HIV Encephalopathy

Our patient is a 32 year old schizophrenic male who had been petitioned for having psychotic symptoms. Notably, two months prior he had an inpatient psychiatric admission. His ADLs had progressively declined over the last month and he had sustained multiple falls. In the hospital he was nonverbal and exhibited cogwheel rigidity. This was initially diagnosed as catatonia secondary to his psychiatric condition; indeed, he was awaiting inpatient psychiatric placement when we assumed his care. Upon further history we diagnosed him with extrapyramidal syndrome due to haloperidol use. His symptoms improved after treatment with benzotropine, baclofen and diazepam. Work up of normocytic anemia seen on a complete blood count obtained on admission ultimately led to a diagnosis of HIV. Investigations to assess his altered mentation included MRI brain, lumbar puncture, blood culture, chest radiography and urine analysis. The only positive result was his MRI which showed periventricular changes consistent with HIV Encephalopathy. He started on appropriate HIV treatment based on a CD4 count of 24. He eventually regained his baseline mentation and had largely regained his strength. Interestingly, subsequent psychiatric evaluation in the hospital suggested that his initial psychotic symptoms were likely due to HIV encephalopathy and not a primary psychotic disorder.

In 2016, 39782 people in the United States received a new HIV diagnosis. While unusual, HIV encephalopathy characterized by neuropsychiatric symptoms can be the initial manifestation of HIV infection. Awareness of the unusual presentations of this disease is important to prevent premature closure of a case and misdiagnosis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 179

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Ensuring Patient Care and Optimizing Resident Satisfaction in an X+Y Clinic Model: Current Problems and Proposed Solutions

BACKGROUND:

Medical education has evolved over years. Residency training consists of inpatient and outpatient training to provide residents with wide exposure and crucial clinical skills. Ensuring continuity of care is a challenge, especially in the ambulatory setting with the newly adopted X+Y scheduling system, which is a system consisting of inpatient rotations interrupted by outpatient weeks, instead of the widely used half-day clinic weekly. In this study, we highlighted the continuity issue that raises with X + Y system and we described a solution with a smartly-designed buddy system.

OBJECTIVE:

To optimize patient care through improving the continuity of care, at the same time to enhance resident's satisfaction with ambulatory training.

INTERVENTION:

Residents were divided into Mini-practice groups, each consist of 5 residents. The resident assigned to the clinic will be the Clinic Continuity of Care Resident (CCR) for that group practice and responsible for 4 other residents' patients' daily needs, concerns and tasks (e.g. medications refill). To ensure optimal performance, additional managing CCR (mCCR) will be assigned each week. The mCCR monitors the patients' tasks to ensure completion of tasks on time, optimizing the patient care.

RESULTS:

Mini-practice groups have a positive influence on our patients care. It also enhances communication between residents, improves the sense of ownership, anatomy, continuity of care and resident satisfaction.

CONCLUSIONS:

Our intervention ensures efficient and on-time completion of patient-related tasks and improves the overall experience for both patients and their providers.

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Poster Presentation No. 180

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Prekallikrein (PK) Deficiency: A Rare Case of Prolonged aPTT, Normal PT Without Bleeding Diathesis

Prekallikrein (PK) deficiency is a rare coagulation disorder characterized by abnormally prolonged aPTT, normal PT and lack of signs/symptoms of bleeding. To date, about 89 cases are reported in the literature. This lab abnormality leads to extensive and expensive testing and delay of scheduled surgeries due to concern for bleeding. On the other hand, there is growing body of literature suggesting an association between PK deficiency and thromboembolism.

Here, we present the case of a 51-year-old woman with history of significant degenerative joint disease and hypertension presenting with isolated prolonged aPTT (of 134.9) while undergoing work up for an elective left knee replacement surgery. Her past surgical history included a hysterectomy without significant bleeding. She denied any overt bleeding, mucosal bleeding, bruises or menorrhagia. Her family history was non-contributory as well. Vitals were within normal limits. Physical exam was normal except for a small bruise on her right forearm. Blood test results showed mild normocytic anemia (Hb:11.6, MCV:83.5), normal WBC, platelet counts and PT/INR. Her aPTT was found to be elevated to 134.9 (range 24-36). Two months earlier aPTT was (42.9). Mixing studies showed correction of aPTT to normal level with 1:2 dilution. Levels of factors XII, XI, IX and VIII as well as Von Willebrand level and activity and lupus anticoagulant evaluation were all normal. Levels of PK, high molecular weight kininogen (HMWK) and heparin were then ordered and showed PK level of <5% confirming the diagnosis. She was cleared by hematology and underwent knee replacement surgery without complications.

Poster Presentation No. 181

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Neurogenic Pulmonary Edema After a Cerebellar Infarct

Neurogenic pulmonary edema (NPE) is a form of non-cardiogenic pulmonary edema that develops rapidly following a central nervous system (CNS) injury. We present a case of NPE after a large cerebellar infarct in a patient who was erroneously admitted for new-onset heart failure.

A 78-year-old woman presented with acute-onset shortness of breath associated with headaches and dizziness. Her oxygen saturation was 92% and diffuse crackles were heard over the lungs. ECG showed no signs of acute coronary syndrome. Troponins were negative and NT pro-BNP was 20pg/ml. Chest radiography showed pulmonary edema. The patient was admitted with a diagnosis of new-onset heart failure and was started on diuretics. An echocardiogram showed an ejection fraction of 60% with mild diastolic impairment. A head CT obtained hours later, after aggravation of her headaches, revealed a large cerebellar infarct with edema, mass effect and herniation of the cerebellar tonsils. A CT-angiogram of the neck showed a total occlusion of the fourth branch of the left vertebral artery.

NPE is the result of a transient sympathetic discharge occurring after a sudden increase in intracranial pressure or an insult to specific areas of the brain. It is diagnosed clinically in the absence of more plausible alternative causes of pulmonary edema. An association between NPE, cerebellar strokes and vertebral artery occlusion has been reported in the literature. It is imperative that physicians remain cognizant of this condition as a misdiagnosis may lead to a significant delay in delivery of care.

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Poster Presentation No. 182

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Castleman's Disease in a Patient with Coexisting Celiac Disease - An Autoimmune Link or a Chance Association?

Castleman's disease (CD) is a rare lymphoproliferative disorder that creates both diagnostic and therapeutic dilemmas for most physicians. Three histologic variants (hyaline vascular, plasma-cell, and mixed) and two clinical types (unicentric and multicentric) of CD have been described. Multicentric Castleman's disease (MCD) is mostly plasma cell or mixed variant that is strongly associated with human immunodeficiency virus (HIV) and human herpesvirus 8 (HHV-8) carrying worse prognosis. Although infrequent, MCD has been reported in relation with certain autoimmune disorders, but its association with Celiac disease have been rarely described. We report a case of a 24-year-old male with advanced HIV, non compliant with HAART, who initially presented with recurrent episodes of diarrhea, abdominal pain and fatigue resulting in multiple admissions. Extensive work up was done including serological testing and a small intestine biopsy which revealed the diagnosis of celiac disease. Also found were mesenteric and retroperitoneal lymphadenopathy which were not amenable to biopsy due to the anatomical location(s). His most recent hospitalization included pulmonary symptoms for the first time resulting in a CT Thorax remarkable for mediastinal lymphadenopathy that was successfully biopsied. The histopathological findings were most consistent with plasma cell variant of Castleman's disease. He was restarted on HAART and discharged with appropriate out-patient follow up. In conclusion, this is a rare case of MCD in an advanced HIV patient with concomitant Celiac disease. It is possible that the coexistence of the two disease entities is more than coincidental, and an underlying autoimmune mechanism may be involved.

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Poster Presentation No. 183

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Libman-Sacks Endocarditis Presenting with Embolic Cerebrovascular Disease

Introduction

Libman-sacks endocarditis(LSE) is most commonly associated with advanced malignancies, however it can also occur in patients with underlying systemic lupus erythematosus(SLE).

Case

A 24 year old woman with SLE not on any medications was brought to the emergency by her mother with complains that her daughter has been forgetting things for past two weeks. Physical examination was significant for tachycardia and systolic murmur Grade-3 in the mitral area. Labs were positive for anti-cardiolipin IgG and IgM, beta 2 glycoprotein IgG and IgM, anti RNP, anti-Sm and troponin. Transthoracic echocardiography showed decreased ejection fraction, signs suggestive of takotsubo cardiomyopathy and large echodensity attached to mitral leaflet. Left heart catheterization showed clean coronaries confirming Takotsubo cardiomyopathy. Trans-esophageal echocardiography showed multiple irregular and mobile masses joined together and attached to the anterior papillary muscle. MRI brain showed multiple anterior and middle cerebral artery watershed infarctions. The patient was diagnosed with Libman sacks endocarditis after biopsy of the valve vegetation. She underwent mitral valve replacement, started on anticoagulation for antiphospholipid antibody(APL) syndrome and prednisone for SLE.

Discussion

The incidence of LSE increases in patients with SLE having APL syndrome. LSE usually remains silent and is usually diagnosed at biopsy but our patient developed cerebral infarcts likely from LSE. We want to emphasize that LSE can be source of cerebral emboli especially in patients with hypercoagulable state.

Conclusion

SLE with APL syndrome patients are at increased risk of developing LSE which in turn predisposes them at risk for cerebral emboli.

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Poster Presentation No. 184

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A Case of HIVAN Presenting with Heavy Proteinuria and Renal Failure

HIV associated Nephropathy (HIVAN) was first described in 1984 in a group of 10 patients with advanced AIDS. The typical features include high grade proteinuria and rapidly progressive renal failure which was initially mistakenly attributed to heroin use. HIVAN is now considered the 3rd leading cause of ESRD among African Americans between the ages of 20 and 64. We present a case of HIV-1 infected female with AIDS and heavy proteinuria who had rapid progression to ESRD requiring dialysis. The patient presented for perirectal pain and was found to have a hemoglobin of 6.8gm/dL and a creatinine of 6.56gm/dL. Urinalysis showed heavy proteinuria without hematuria. Additional labs did not support an alternative diagnosis. Renal biopsy showed collapsing segmental glomerulosclerosis with mesangial immune complex deposits, consistent with HIVAN. Patient was started on dialysis via permacath and was restarted on HAART according to resistance patterns as an outpatient. HIVAN accounts for 1% of new ESRD diagnoses, particularly affecting young African American males and IV drug users. Slowing of the disease is contingent on early diagnosis, prompt commencement of HAART, and routine follow up tests to identify albuminuria, proteinuria, and renal function decline are vital in order to increase the survival of patients.

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Poster Presentation No. 185

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Polymyositis Associated Interstitial Lung Disease Presenting with High Degree AV Block

Introduction

Polymyositis is part of a group of disorders causing widespread systemic inflammation and is associated with interstitial lung disease with a reported prevalence up to 46%. Pulmonary disorders and related pathologies are considered to be a common cause of morbidity in these patients. Here, we describe a patient with well-controlled polymyositis and advanced interstitial lung disease causing pulmonary hypertension and life threatening complications.

Case presentation

Presentation A 59 year old oxygen dependent female with polymyositis and interstitial lung disease presented with dizziness, worsening shortness of breath, leg swelling, nausea, and vomiting. She was taking mycophenolate and prednisone for her polymyositis. On physical exam, the patient was bradycardic with a pulse in the 30s, bilateral pitting edema up to the knees, jugular venous distention, and coarse bilateral crackles in the all lung zones. EKG findings included third degree heart block with a junctional rhythm. Chest x-ray showed severe pulmonary vascular congestion. A temporary transvenous pacemaker was inserted during an emergent right heart catheterization which demonstrated a hypokinetic right ventricle and elevated RSVP of 60mmHg. Initial management involved diuresis which significantly improved her symptoms. After discharge, the patient was scheduled for a permanent pacemaker implantation.

Conclusion

Cardiopulmonary complications from ILD-related pulmonary hypertension dominate the disease course and dictate survivability. Several studies have shown that histological sub classification of the interstitial lung disease is the strongest predictor of survival. This case illustrates the importance of identifying the specific histologic type of ILD in polymyositis patients so that treatment may be optimized.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 186

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Delayed Presentation of Cerebral Air Embolism Following Catheter Ablation

Introduction: Air embolism is an uncommon event caused by a number of factors including some medical procedures. Catheter ablation for atrial fibrillation is an alternative therapeutic option for selected patients with atrial fibrillation, with a success rate of 67% after a single procedure; however, the likelihood of air embolism is increased after this procedure.

Case Description: A 42 year old male who had a catheter ablation for refractory atrial fibrillation approximately one month ago, presented with shortness of breath, altered mentation and intermittent lower extremity weakness. At arrival, the patient had GCS of 3 that quickly improved to GCS of 15 associated with gaze deviation to the right but remained weak in upper and lower extremities and short of breath. CT head showed pneumocephalus likely due to air embolus. While arrangement was being made to transfer him for hyperbaric oxygen treatment, his neurological status declined rapidly and he became unstable requiring intubation and pressor support; he was deemed unstable for transfer. In spite of aggressive ICU management, patient expired within 36 hours of admission.

Discussion: This is an example of a delayed yet catastrophic presentation of air embolism, where rapid recognition and intervention is critical for reducing mortality. This patient presented status post-ablation for atrial fibrillation, with complications of air embolism due to a possible atrio-esophageal fistula. It is important as a clinician to suspect air embolism following catheter ablation as one of the rare but potentially lethal complications and administer prompt hyperbaric oxygen to reduce mortality.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 187

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A Rare Case of Metastatic Inflammatory Myofibroblastic Tumor Causing Multiple Mass Effects

Inflammatory myofibroblastic tumor (IMT) is a histologically distinct lesion involving predominantly visceral soft tissue. We present a patient with diffuse intra-abdominal involvement by IMT.

Case description: 42 year old man presented with gradually increasing abdominal girth over one year and CT scan showed ascites with unusual appearance of kidneys. Peritoneum, liver and spleen masses were noted. Multiple paracentesis were performed for recurrent ascites. Peritoneal fluid analysis was always exudative with negative malignant cells and negative infectious workup. PET scan showed FDG avid lesions throughout the peritoneum. He underwent laproscopic exploration with renal and peritoneal nodule biopsy. Pathology was consistent with inflammatory myofibroblastic tumor with spindled myofibroblast in a myxoid background of blood vessels and chronic lymphoplasmacytic infiltrates. In addition, to ascites, patient had hydronephrosis causing renal failure and scrotal edema from hydrocele . ALK testing was negative. After thorough literature review of this rare disease, treatment was initiated with steroids (Prednisone 60mg). He required intermittent paracentesis for recurrent ascites and he underwent surgical resection of his hydrocele and percutaneous nephrostomy for his hydronephrosis. His steroids are tapered to prednisone 10mg over past 3 years. His recent PET scan showed stable to improved disease.

Discussion: Inflammatory myofibroblastic tumor is a rare disease of unknown etiology with inflammatory and neoplastic behavior. Our patient had metastatic intra-abdominal involvement making surgical resection difficult. Literature review showed therapeutic benefit with Prednisone ,Anthracycline, Vincristine. There is also an association with ALK receptor and if positive, Crizotinib can be used.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 188

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Hemophagocytic Lymphohistiocytosis in an HIV Patient with EBV Activation and Hodgkin Lymphoma

Hemophagocytic lymphohistiocytosis (HLH) is a life-threatening syndrome caused by unregulated T-lymphocytes and macrophages leading to severe inflammation and multi-organ failure. The acquired form is a rare systemic syndrome with very high mortality. It remains a diagnostic challenge due to its vague presentation and sparse description in literature. We present a case of HLH in an HIV patient with concurrent EBV activation and Hodgkin lymphoma.

A 28-year-old man with HIV (CD4 count: 103cells/ μ L) was admitted with high-grade fevers, jaundice, and non-bloody diarrhea. Laboratory studies showed direct hyperbilirubinemia (>20mg/dl), transaminitis, and elevated alkaline phosphatase. MRCP demonstrated normal biliary ducts with hepatosplenomegaly. He later developed pre-renal azotemia and progressive pancytopenia. Work-up was consistent with a hypo-proliferative bone marrow and high ferritin level (69,664ng/ml). Further tests revealed a positive EBV PCR, hypertriglyceridemia (456mg/dL) and elevated soluble CD25 level (185,900pg/mL). Bone marrow biopsy showed Hodgkin lymphoma with extensive necrosis and numerous histiocytes with occasional forms showing hemophagocytosis. The patient was treated with cyclophosphamide and steroids. He developed ventilator dependant respiratory failure culminating in demise within 15 days of initial inpatient admission.

HLH can present with various clinical signs and symptoms and demonstrate a wide array of laboratory findings. It is diagnosed using the revised and updated criteria proposed by the "Histiocyte Society". HLH has a poor overall prognosis even with appropriate therapy. This might be in part due to delayed diagnosis and treatment initiation. Data on HLH in patients with HIV remains very scarce. Therefore, our case is a valuable supplement to the literature.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 189

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Made Up or Makeup

Clinicians are trained to examine and diagnose medical conditions that can be explained by pertinent positive history and physical examination findings which can be supported by laboratory and radiographic findings. However, there are many conditions that do not fit with the conventional findings and are fabricated by patients to obtain medical attention. Malingering and factitious disorders are common and underdiagnosed and impose a financial burden. 19 year old female with no past medical history presented to the Emergency Department with 2 day history of redness that started on her left forearm and began spreading. Patient reports that an animal bit her while she was reaching for a feather. The patient was treated with anti-venom; however the arm became dusky and spread to her shoulder. Subsequently, patient was seen removing the "dusky" skin with makeup remover and reported that she has not seen her father for many months and desired the attention that she obtained by assuming the sick role.

Many conditions exist in patient with a normal physical exam and laboratory findings. These conditions tend to be underdiagnosed and undertreated. This case highlights the importance of obtaining a complete history and physical examination as opposed to relying purely on laboratory and radiographic findings. It is estimated that 4-6% of the general population and 17% of primary care patients has somatoform disorder which can be diagnosed and lead to better patient care and decrease the economic burden in the United States.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 190

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A Dissecting Port-a-Cath: Rare Phenomenon Requiring Emergent Intervention

Introduction

Totally implantable venous access devices, also known as ports act as quick and safe delivery systems in cancer patients. The erroneous arterial malposition of the catheter after successful implantation is estimated at 1.1 to 3.7%. It is mostly related to emergent placements, predominantly on the left side. The complication rate with fluoroscopic guidance is less, but not completely eliminated.

Case Presentation

89-year-old female with metastatic Merkle-cell carcinoma underwent a successful central venous port placement (Port-a-Cath) by right internal jugular (RIJ) vein approach under ultrasound and fluoroscopic guidance. A satisfactory position was documented radiographically. The next day, patient complained of mid-sternal chest pain and dyspnea, with CT revealing the port perforating RIJ and entering into right subclavian artery (RSA). Transthoracic echocardiogram localized the catheter tip just above the aortic valve. The patient underwent endovascular retrieval of the port combined with a stent graft placement into RSA without any complications.

Discussion

Our case illustrated difficulties of recognition of arterial cannulation from malposition of the port. Bright red blood flushing back from the port can be overseen and patient may initially remain asymptomatic. Massive hemorrhage is of special concern as the site is not compressible. Embolic complications may also occur. 2-dimensional chest radiography is a valuable tool for post-procedural confirmation of the catheter localization, however its limitations may lead to false conclusions. The treatment of a subclavian artery perforation is challenging. Interdisciplinary decision making is required on case by case basis for the best outcomes in patients.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 191

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Exudative Pleural Effusion with Negative Cytology

Case Presentation: 72 year-old woman with a history of dementia, hypothyroidism, osteopenia, osteoarthritis, and right humerus fracture two weeks prior to admission presented to the ED with heart rate of 120 and systolic blood pressure in the 90s. A right pleural effusion one month prior was exudative with negative cytology. CT PE protocol at the time of admission showed no pulmonary emboli or discrete masses. There was nodular thickening of the pleura and recurrent right pleural effusion. Inpatient work-up again revealed exudative pulmonary effusion with negative cytology. Rheumatoid factor, anti-CCP, tuberculosis testing, cultures, and cytology were negative. Ultimately, pleural biopsy established the diagnosis of pleural mesothelioma. She had worked in earthquake disaster relief but had no other exposures to asbestos.

Discussion: This case highlights the importance and limitations of pleural fluid analysis as well as the diagnosis and prognosis of pleural mesothelioma. Exudative pleural effusions are typically defined by Light's criteria, but the false positive rate is substantial and transudative effusions are more common. Exudative pleural effusions are most commonly caused by malignancy or infections, but there are numerous other causes. Pleural fluid cytology has about 65% sensitivity for malignancy with a single sample and up to 90% sensitivity after three samples, but the sensitivity for mesothelioma is 33%. Diagnosis of mesothelioma often relies on direct tissue biopsy, although work is in progress investigating biomarkers. Mesothelioma is a rare cancer, and asbestos exposure is the greatest risk factor. Fewer women than men with mesothelioma have a known asbestos exposure.

Poster Presentation No. 192

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A Rare Case of Temozolamide Induced P-ANCA Vasculitis Leading to RPGN

We present a case of a 64 year old male with a past medical history of glioblastoma multiforme who presented to the emergency department with severe bilateral leg pain, moderate swelling, and erythema that began after receiving radiation and a single dose of temozolamide for his GBM. On admission, he was diagnosed with sepsis secondary to bilateral lower extremity "cellulitis", atrial fibrillation with RVR, AKI on CKD, and thrombocytopenia. He was treated with Vancomycin, Cardizem, and prednisone. Three days after admission, he became severely dyspneic requiring intubation. Patient developed acute renal failure needing CRRT, and shock supported with norepinephrine, vasopressin and phenylephrine. Cefepime and stress dose steroids were added. His "cellulitis" on admission suddenly transformed into petechiae, purpura, and multiple bullae all throughout his lower extremity (Photo 1) that slowly migrated proximally over several days. Despite maximal support, he continued to deteriorate and his family withdrew support ten days after admission. Four days after his death, his labs returned positive for P-ANCA.

ANCA vasculitis remains troublesome to recognize and diagnose, especially in the critical care setting where patients have multiple comorbidities complicating the clinical picture. Positive P-ANCA requires follow up testing with myeloperoxidase (MPO) antibodies with or without tissue biopsies of affected organs to confirm etiology. Once positive, MPO antibodies are associated with microscopic polyangiitis, Churg-Strauss syndrome, crescentic glomerulonephritis, and granulomatosis with polyangiitis (Wegener's). Unfortunately, skin/lung/renal biopsies and myeloperoxidase anti-neutrophil cytoplasmic antibodies (MPO-ANCA) were not obtained for a definitive diagnosis.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 193

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Candida Endocarditis: A Diagnostic Challenge with a Fatal Outcome

Fungal endocarditis is a rare and fatal condition. It can be extremely difficult to diagnose, and often is only identified postmortem. We present a fatal case of candida endocarditis and highlight the challenges in diagnosis.

A 46-year-old male with a history of IVDU was sent into the ED by his PCP with fevers, chills, and a new murmur. In the prior four months, the patient had been seen for culture-negative lumbar spondylodiscitis, recurrent forearm cellulitis with abscess, and more recently an erythematous, painful index finger lesion. On this admission, echocardiogram demonstrated an aortic valve vegetation and his blood cultures grew candida albicans. Antifungal therapy was initiated and he underwent aortic valve replacement. He was discharged on anidulafungin and warfarin. Two days after discharge, he was found unresponsive and a CT scan showed intraparenchymal hemorrhage with hydrocephalus and cerebellar tonsillar herniation. The patient died shortly after withdrawal of care.

This case highlights the difficulty in achieving a diagnosis of fungal endocarditis. The patient had multiple contacts with the healthcare system over several months for what in hindsight were septic embolic events. Given the negative culture data, endocarditis was not suspected until he eventually developed clear systemic symptoms and a new murmur. Physicians should maintain a high suspicion for fungal endocarditis in patients with risk factors and findings that raise suspicion for septic embolic phenomenon. In these instances, there should be a low threshold to obtain echocardiography. Candida forms large, dense vegetations that are almost always identifiable on transthoracic echocardiogram.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 194

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Choking on Cocaine: A Rare Case of Cocaine Induced Angioedema

Introduction: Angioedema is a condition mostly related to drug allergies. The hereditary variant is due to c1 esterase inhibitor deficiency . Most cases presenting to the ED are mild with facial swelling that resolve with epinephrine or steroids and only severe cases requires airway protection with intubation.

Case Description: Our patient is a 34 year old female who presented to the ED with complains of acute onset dyspnea and swelling of her lips and throat . On physical exam, she was in respiratory distress and had a massive swelling of both of her lips and the uvula. There was an audible stridor with wheezes on auscultation but no rashes. She was given epinephrine and methylprednisolone without resolution of her symptoms leading to intubation. C4 and C1 esterase inhibitor and C1Q binding serum levels were normal. Her UDS was positive for cocaine and the patient admitted to inhaling cocaine prior to the episode. Patient was kept in the ICU for another day before being extubated. Her swelling had resolved by that time.

Discussion: Cocaine induced angioedema and bronchospasm are rare findings and have been reported after both nasal insufflation and inhalation of cocaine. The exact mechanism is unknown but most likely is an immunoallergic reaction or increased α -adrenergic tone. Regardless of the proposed mechanisms, these apparently allergic manifestations of cocaine are exceptionally uncommon.

Treatment is similar to other causes of angioedema with reducing swelling and providing airway support.

American College of Physicians, Michigan Chapter Residents Day 2018

Poster Presentation No. 195

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Survival After a Severe Case of Metformin-Associated Lactic Acidosis

Metformin is recommended as first line therapy for type 2 diabetes mellitus. A rare side effect is metformin-associated lactic acidosis (MALA), which carries a mortality rate of nearly 50%. We present a case of MALA and discuss the implications for current practice guidelines.

A 66-year-old male with type 2 diabetes mellitus (T2DM) maintained on metformin, and stage 3 chronic kidney disease (CKD) presented to the emergency department (ED) complaining of shortness of breath. In the ED, labs were remarkable for GFR of 4mL/min, lactic acid >20mmol/L, anion gap of 55mmol/L, arterial pH was 6.83 and bicarbonate level of 3mmol/L. The patient was obtunded and intubated for airway protection. He received continuous renal replacement therapy and intravenous bicarbonate until lactic acid and anion gap were corrected. He required intermittent hemodialysis three times weekly for three weeks, after which his renal function improved and dialysis was discontinued. At two-month follow-up, he made a complete recovery.

In 2016, the guidelines for the use of metformin were updated to incorporate more patients with renal insufficiency, including those with a GFR of 30-45mL/min. With more inclusive criteria and the increasing incidence of T2DM, a growing number of patients will be prescribed metformin and be at risk for developing MALA. While early recognition and appropriate therapy can lead to favorable outcomes, the mortality rate remains high. This highlights a need for predictive tools for monitoring patients on metformin and assessing which patients are most likely to develop this deadly side effect.