New Jersey Chapter

American College of Physicians

Students Abstract Competition

2017 Submissions

Category	Name	Additional Authors	Program	Abstract Title	Abstract
Clinical Vignette	Vatsal Bhatt	Clifford Stermer, Vivien Hsu, Ranita Sharma	Rutgers - New Brunswick (Ranita Sharma)	Oropharyngeal Dysphagia: Rare Presenting Symptom of Statin-induced HMG CoA Reductase Necrotizing Autoimmune Myopathy	Necrotizing Autoimmune Myopathy (NAM) associated with 3-hydroxy-3-methylglutaryl-coenzyme A Reductase (HMGCR) antibodies has been described in statin-induced and statin-naive patients. Proximal muscle weakness is the presenting symptom in HMGCR NAM. CK levels can exceed 10x normal values. Statin-induced cases involve two thirds of HMGCR NAM patients and are more likely to respond to immunosuppressive therapy. Muscle biopsy confirms the diagnosis. We report a case with progressive oropharyngeal dysphagia as the presenting complaint with poor response to treatment. To our knowledge, there has been only one previously reported case of statin-exposed HMGCR NAM with a similar presentation. A 79 year old gentleman presented with four weeks of progressive dysphagia to solids and liquids, a 25lb weight loss and fatigue. He denied odynophagia, vomiting, dyspnea, fevers, skin changes, or arthralgias. No recent vaccinations were administered. Over time he also reported pain with weakness in bilateral lower extremity proximal muscle groups. Increased effort was needed to rise from the sitting position. Once upright he could ambulate. He denied tobacco or alcohol use. He has diabetes treated with metformin, hypertension controlled with medications and hyperlipidemia treated with daily atorvastatin for the past 2 years. Statin was discontinued 2 weeks prior to admission. Age appropriate cancer screening was completed. On exam HR was 96, BP was 137/65 and RR was 18 without hypoxia. He was thin with notable temporal wasting and gargled speech. No neck masses were detected. Cardiopulmonary and abdominal exam were normal. Rashes and edema were absent. Neurological exam revealed intact cranial nerves, no tremors, fasciculations or muscle wasting, no difficulty in raising arms above his head but visible difficulty rising from a chair with a subsequent normal gait, symmetric reflexes and normal cerebellar and sensory testing. Labs included a CPK of 8185, aldolase of 346 (normal < 8), AST/ALT of 176/395 (subsequently normalized), normal renal function, and a hemoglobin of 10. TSH and B12 levels were normal. HIV, T-SPOT, Hepatitis B/C were negative. Vitamin D levels were low. A barium swallow confirmed cricopharyngeal paralysis. MRI brain was normal. Myopathy workup was pursued. Myositis panel antibodies including Jo-1, MI-2, SRP, U2-snRNP, U1-RNP, NXP-2, and TIF1 were all negative. Anti-HMGCR antibodies were markedly elevated at > 200 (normal < 20). Biopsy revealed muscle fiber necrosis, phagocytosis, macrophages and regeneration with minimal inflammation. Despite steroids, IVIG and Rituximab, the patient's clinical condition deteriorated with inability to ambulate and continued need for PEG feeding. We highlight two variations to the traditional description of statin-induced HMGCR NAM: oropharyngeal dysphagia replacing the classic presentation of proximal muscle weakness and progression of disease despite immunosuppression.

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Clinical Vignette	Vatsal Bhatt	Joseph Ibrahim, Chris Maulion, MD. George Batsides, MD. Pratik B. Patel, MD.	Rutgers - New Brunswick (Ranita Sharma)	Primary Cardiac Angiosarcoma presenting as a Right Atrial Mass	A right atrial mass is a rare finding that is often incidentally reported on echocardiogram or other imaging studies. It can be caused due to a thrombus, primary or metastatic cardiac tumor, or a tricuspid valve vegetation. Primary tumors of the heart are extremely rare with a reported incidence of about 0.02%. Primary cardiac angiosarcoma is the most common histological subtype of the primary tumors. We present a case of a 44 year old woman who presented with exertional dyspnea and was found to have a 7.0 cm x 3.5 cm right atrial mass on transthoracic echocardiogram that required surgical resection. Pathology of the mass showed highly aggressive primary cardiac angiosarcoma that grew within 5 months. Patient is a 44 year old woman with a history of Diabetes Mellitus Type II, and hypertension who presented for dyspnea on exertion, generalized weakness, and intermittent chest discomfort for few days. Patient was seen at our institution in April of 2016 for an evaluation of pericardial effusion and had a pericardial window. Transthoracic echocardiogram at this time showed small pericardial effusion but there was no evidence of any atrial mass. On exam, she was hemodynamically stable with HR of 85, BP of 118/85, RR of 16, and Pulse Ox of 99% on RA. Her cardiopulmonary exam was within normal limits with no jugular venous distention, murmurs/rubs/gallops, and wheezes, rales, and rhonchi. She had no peripheral edema. Chest x-ray showed cardiomegaly. Troponins were negative x3. EKG showed no ST segment changes. Transthoracic echocardiogram showed right atrial dilation with a large right atrial mass measuring 7.0 cm x 3.5 cm occupying the right atrial cavity and nearly occluding right atrial outflow across the tricuspid valve. Transesophageal echocardiogram done 5 days later confirmed these findings. There was subsequent superior and inferior vena cava dilatation. There was right-to-left atrial septal displacement, suggesting elevated right sided pressures. Ejection Fraction was reported to be 60-65%. CT scan of the chest further revealed that the mass was extending into right ventricle and pericardium. Cardiothoracic surgery was required due to large obstructing right atrial mass with subsequent tricuspid valve stenosis and right ventricle dysfunction. Right mini thoracotomy was performed with complete resection of the right atrial mass and partial resection of the right atrial wall. The mass was pulsating because of its vascularity and had a broad 3 x 3 cm stalk coming from the lateral wall of the right atrium. Right atrium and right ventricle function improved post resection. Mass was sent to pathology, which revealed high grade angiosarcoma with spindle cells and associated necrosis. Immunohistochemistry revealed that the tumor is strongly positive for CD31, CD34, and SMA while negative for melanoma markers.

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Clinical Research	Blaine Huss	Elizabeth John MD, Navaneeth Narayanan PharmD, Mary Bridgeman PharmD, Sita Chokhavatia MD	Rutgers - New Brunswick (Ranita Sharma)	Clostridium difficile Infections in the Setting of Chronic Opioid Use: Do Pain Medications Actually Worsen Infections?	**Introduction:** Patients with a history of chronic opioid use may have worse clinical outcomes related to Clostridium difficile infection (CDI) from alterations in gastrointestinal (GI) function and motility. Understanding the extent of this relationship will allow providers to target at-risk patients and provide prophylaxis and/or alter antibiotic therapies to lower the risk of a serious infection. The intent of this study is to evaluate the relationship between chronic opioid use and CDI disease severity. **Methods:** A retrospective review of patient medical records was conducted to determine the relationship between chronic opioid use and clinical outcomes related to CDI. All adult inpatients having diagnosis codes for diarrhea and positive C. difficile stool toxin or PCR and chronic opioid use admitted between 1/1/11 and 12/31/15 were evaluated. Patients younger than age 18 years, pregnant, or with inflammatory bowel disease, irritable bowel syndrome, or concurrent etiology of persistent diarrhea (e.g., chronic laxative use) were excluded. **Results:** Of the 25 cases, the majority occurred in Caucasians (n=18) and males (n=12) with an average age of 52.12±13.29 years. Oxycodone was the most frequently reported chronic opioid used either alone or in combination with other narcotics (n=10), followed by methadone (n=6). The average length of stay (LOS) was 18.44±16.54 days, and an average LOS related to CDI of 14.24±13.24 days. Hospital-acquired (HA) CDI, occurring greater than 72 hours from admission, occurred in 11 (44%) cases. 12 cases (48%) had a readmission within 30 days of hospital discharge, with 10 cases (40%) reportedly using antibiotics prior to admission. 15 patients (60%) were also using acid suppressive medicines during hospitalization. 17 cases (68%) were regarded as mild/moderate CDI, 7 cases (28%) as severe, and 1 (4%) as complicated. Ileus was reported in 6 cases (24%) and toxic megacolon in 3 (12%). **Discussion:** When compared with previous outcomes studies related to CDI severity, our results suggest that patients on chronic opioids have a younger age of CDI and longer LOS. By demonstrating a qualitative relationship between chronic opioid use and CDI severity, physicians should minimize the amount of narcotics administered to patients being treated for CDI. A follow-up retrospective cohort study is planned."

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Clinical Vignette	Matthew Norris	Dr. John Norris III MD FACP	Other	A Delayed Case of Reactive Arthritis Refractory to First and Second Line Treatments	Reactive arthritis is a relatively rare disease that is highly heterogeneous in presentation and has no gold standard diagnostic test. This creates challenges in regards to potential research into etiology, pathophysiology, and management of this disease as well as complicates making the diagnosis. A 32-year-old male presented with decreased range of motion in his left wrist and right ankle. This was associated with swelling and pain in his right knee, lower back, and neck. He also complained of conjunctivitis, intermittent urethral discharge, and pelvic rash. He claimed to not have had sex in over 14 months, the reason being that within days of a one night stand he developed a urethral drip for which he did not seek medical attention. He further denied any recent respiratory infections or gastrointestinal symptoms. One week prior to this visit, he went to an urgent care that administered 250mg IM ceftriaxone as well as prescribed doxycycline for the urethral drip, indomethacin for the joint swelling/pain, and terbinafine for the pelvic rash. They also referred him to the local health department for HIV and RPR testing; both were negative. Indomethacin provided relief for six days, however when pain returned on the seventh day he sought a second opinion. Vitals were normal with exception of low-grade fever. Exam was significant for peripheral conjunctivitis of his right eye, white scale over redness in his pubic area, and noticeable swelling of right ankle and left wrist – no redness or warmth observed. Range of motion was restricted at all major peripheral joints. No urethral discharge was observed. Labs showed an ESR of 42mm/hr and CRP of 7.2mg/dL. CBC and CMP were noncontributory. Synovial fluid of right knee joint showed 6,390 WBCs without bacteria or crystals. Both RF and anti-CCP antibodies were negative. Urinalysis suggested sterile pyuria with no growth on special cultures. Additional gonorrhea and chlamydia testing were also negative. For the next two months, he experienced a cyclic pattern of partial relief followed by a complete return of symptoms. NSAIDs with oral steroids were ineffective, then the addition of intraarticular glucocorticoids failed. The urethral drip reoccurred upon completion of the doxycycline. After three months, we stopped the patient’s regimen and started him on methotrexate. Symptoms completely resolved after a month, however partially returned two weeks later. This case exemplifies how the heterogeneous presentation and lack of a definitive diagnostic test for reactive arthritis can result in misdiagnosing a patient with multiple separate conditions. It also shows how resistant reactive arthritis can be to treatment. Although treatment by the patient's prior physician prevented us from confirming chlamydia or gonorrhea infection, we believe this case was due to the untreated STD acquired the year prior.

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Quality Improvement/Patient Safety	Dusan Bosotov		Other	Positive Psychology in Medicine	Positive Psychology addresses a subject traditionally not considered in the medical education and that for students of medicine, touches directly during their years of training. Faced with high rates of burnout from early in the medical education that will intensify during residency, will serve the students to find a discipline that provides psychological and social strategies that can help both as professionals and as students in the area of health to cope with this situation more effectively. To live in a psychological, social and spiritual balance, besides the mere absence of problems, is the goal that everyone seeks to reach in their life. It is at this point where the positive psychology takes place. If we use the positive concepts to balance the three domains of individual well-being (the personal, the professional, and the happy life) we will create a virtuous circle which will enhance the current well-being of the medical students, as future doctors. Most importantly, it could convey a better care and overall patient well-being by way of a more than just simple healing of their physical and mental illnesses. In my personal case, the positive psychology concepts and practices have given me tools to face patients and most importantly to compare what I have been thought thus far. Thus, I seek to emphasize not only the disease and its cure, but I care not only about the physical or mental but rather both combined including even the social aspects of the person I have in front of me. Therefore, besides caring for their discomfort, I also care to promote the positive aspects of the patient. The patient should be treated as a unit, making him or her aware of their own minds' healing potential. As specific and effective drugs that exist and help with the disease or disorder in question, it is essential for one to understand and help the patient who suffers as a unique and irreplaceable being that needs a personalized therapy, beyond simple healing of their illness. In addition, I'd like to give an emphasis to the need to incorporate the concepts of positive psychology in the the medical schools' curriculum. The traditional style, based solely on students' failures and weaknesses should be complemented with positive psychology tools in order for these students to identify their strengths and qualities so they can be empowered. In fact, the positive psychology not only will aid on a personal development while in training, but it can bring large advantages in the doctor-patient relationships and in the healing potential of the medical profession. But in order for this perfect world to happen, the incorporation of positive psychology concepts and practices into medical education would be a perfect start.

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Clinical Vignette	Matthew Norris	Sneha Shredtha	Other	Hypercalcemia in end stage renal failure, a novel finding of Cryptococcus laurentii	**Introduction:** This case pertains to a woman with end stage renal disease who presented with acute mental status change, diffuse lymphadenopathy, and hypercalcemia. Lymph node biopsy showed non-necrotizing granulomatous lymphadenitis that cultured Cryptococcus laurentii. Although symptoms persisted after correcting electrolyte imbalances, they resolved after three weeks of antifungal therapy. C. laurentii is a lesser known non-neoformans cryptococcus that until recently was considered saprophytic and has been increasingly reported in the literature. Although three previous cases have been reported in patients receiving peritoneal dialysis, we believe this to be the first case associated with hemodialysis. **Case Presentation:** A 49-year-old African American female with 14-year history of end stage renal disease presented with a three day history of fluctuating altered mental status and low grade fever. History was negative for weight loss, sick contacts, travel, animal exposure, or use of peritoneal dialysis; history was significant for hypertension and cerebrovascular accident one month prior linked to lupus anticoagulant. Patient denied history of smoking, alcohol abuse, and recreational drug use. Her other vitals at admission were normal with the exception of blood pressure measured at 179/90. At admission, the patient was alert and oriented with no new neurological deficits; the only positive finding on exam was axillary lympadenopathy. CBC showed anemia with mild leukocytosis and HIV screenings were negative. CMP showed calcium 13.5, phosphorous 6.0, sodium 132, potassium 3.1, chloride 86 with other values within normal limits. Bacterial cultures, head CT, X-ray, and EKG showed no relevant findings. However, chest CT showed multiple prominent mediastinal and axillary lymph nodes. Further workup showed PTH was 42.2 whereas PTH-rP and total vitamin D 1,25(OH)2 were elevated at 65 and 252 respectively. Quantiferon TB gold and flow cytometry were negative. Also, serum ACE and complement levels were within normal limits. Lymph node biopsy showed non-necrotizing granulomatous lymphadenitis that revealed Cryptococcus laurentii during culture. After three weeks of antifungal therapy and resolution of altered mental status, she was discharged back to extended care on antifungal therapy with scheduled follow-up. **Discussion:** This patient experienced fluctuating mental status that progressively worsened over a one month span. Many differentials were ruled out at this time. One consideration in the setting of diffuse lymphadenopathy, inappropriately high vitamin D 1,25(OH)2, and suppressed PTH levels (usually high in long-term ESRD patients) was granulomatous disease – which we found. Although we cannot confirm hemodialysis as the vector of transmission, symptom resolution after three weeks of aggressive antifungal therapy supports classifying Cryptococcus laurentii as a pathogen. This case is also the first to link C. laurentii to hemodialysis."