Abstracts from the Louisiana American College of Physicians Associates Meeting

Each year medical students in Louisiana and residents from the seven internal medicine training programs in Louisiana are invited to submit abstracts for the annual Louisiana American College of Physicians (ACP) Associates Meeting. The content of these abstracts includes clinical case vignettes or research activities. The abstracts have all identifying features removed (ie, names, institutional affiliations, etc.) before being sent to three physician judges who are not directly affiliated with the medical schools or training programs. Each judge scores each abstract independently and then the scores from the three judges are averaged and ranked. This year we are able to publish the 26 most highly ranked abstracts presented at this year’s competition. These abstracts (15 oral; 11 poster) were presented at the Associates Meeting held at the Louisiana State University Health Sciences Center in New Orleans on January 26, 2010. We would like to thank the Journal of the Louisiana State Medical Society and appreciate its efforts to publicize the hard work of these young trainees.

Lee Engel, MD, PhD
Chair, Louisiana Associates Liaison Committee

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Severe Extraintestinal Manifestations of Crohn’s Disease: A Case Report.
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Introduction: Dermatological lesions may herald a serious underlying systemic disorder. Here we discuss the case of a man with inflammatory bowel disease marked by numerous, severe, extra-intestinal manifestations.

Case: A 42-year-old African-American man presented to our institution with multiple purulent sores on his inner thighs and buttocks causing pain and drainage for one week. The patient had a past medical history of nephrolithiasis with stent placement, pyoderma gangrenosum, and anti-Saccharomyces cerevisiae antibody positivity. Review of systems was significant for a 60-pound weight loss over a six-month period, intermittent, crampy abdominal pain, alternating constipation and diarrhea, and bright red blood per rectum following bowel movements. Our working diagnosis was Crohn’s disease and a colonoscopy was scheduled as an outpatient for definitive diagnosis. On admission, he was afebrile, mildly tachycardic, and blood pressure was 105/70 mmHg. He appeared older than stated age and was in no apparent distress. Physical exam was positive for diffuse scarring alopecia sparing the crown and temples. He was blind in his right eye. There was a cobblestone-like appearance to the facial skin, with numerous papules and cysts. Gingiva were scattered with small verrucoid papules. Draining fistulous lesions and perineal ulcerations were present on his buttocks. Examination of lower extremities revealed a large, purulent ulceration on the right medial thigh that was surrounded by a heaped-up, violaceous border consistent with the appearance of pyoderma gangrenosum. There were similar lesions scattered throughout the lower extremities in acute and chronic stages of development. The patient was treated with antibiotics for superinfection of pyoderma gangrenosum, and infliximab infusions for suspected Crohn’s disease.

Discussion: This case illustrates striking extra-intestinal manifestations of untreated inflammatory bowel disease in one individual. Classic dermatologic manifestations of inflammatory bowel disease include pyoderma gangrenosum, erythema nodosum, Sweet’s syndrome, and metastatic Crohn’s disease. Notably, pyoderma gangrenosum is more commonly associated with ulcerative colitis than with fistulizing Crohn’s disease. While our patient presented with both pyoderma gangrenosum and perianal fistulae, his illness was further punctuated by less common albeit associated signs of Crohn’s disease: impressive alopecia, nodular cystic acne, monocular blindness, oral lesions, and renal calculi. Recognition of this constellation of signs warrants a careful review of systems and a low threshold to further investigate for an underlying disorder such as Crohn’s disease.

Sepsis of the Sea.
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Case: A 57-year-old man presented to an outside hospital with worsening right lower extremity swelling and tenderness for the past week after initially injuring his leg on a metal pot during a seafood boil. His past history included hypertension and significant alcohol abuse. The physical examination demonstrated a middle-aged man with decreased responsiveness, alert to name alone who was hypotensive, tachycardic, and tachypnic. His
right leg was extremely erythematous, edematous, and tender from the knee distally. There was significant skin breakdown with gangrenous changes with hemorrhagic bullae surrounding the ulceration at the site of his initial injury. Diagnostic testing revealed a metabolic acidosis, with remaining electrolytes being normal. The complete blood count was normal and there was no leukocytosis. Further laboratory testing demonstrated acute renal failure, an elevated erythrocyte sedimentation rate, and a mild transaminitis. Imaging of the extremity demonstrated significant soft tissue swelling but no osteomyelitis. The patient underwent massive debridement with fasciotomy from the right knee distally. Blood cultures obtained prior to the initiation of antibiotics and tissue cultures grew pan-sensitive *Vibrio vulnificus* and the patient’s antibiotics were changed to include doxycycline. The patient required supportive care including norepinephrine for blood pressure support and treatment for alcohol withdrawal. Further debridement followed for complete resection of the infected tissue and autograft reconstruction of the lower right leg. The patient was stabilized, his renal failure resolved, and he was discharged home with follow-up.

**Discussion:** *Vibrio vulnificus* is gram-negative, motile, curved bacterium that thrives in warm seawater. Most infections are attributed to consuming raw oysters harvested during summer months. However, inoculation can occur with direct wound exposure to warm seawater or handling of raw seafood. Patients who are immunocompromised, including alcoholics with liver disease, are at risk for infection. Patients typically present with nonspecific findings including fever, diarrhea, nausea, and vomiting. However, most will proceed to the typical skin findings of severe cellulitis with bullae. The mortality rate can be as high as 90% when hypotension is present. Doxycycline and cefazidime alone with supportive care and surgical debridement is the recommended treatment for *Vibrio vulnificus*. The diagnosis of vibrio should be considered in patients with risk factors for liver disease and seafood exposure, as early treatment with appropriate antibiotics provides the only chance for survival of this infection.

“**And Then It Hit Me**” Osetlamivir and Thrombocytopenia.

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**Introduction:** With growing concern over a possible H1N1 pandemic superimposed on the normal influenza season, it is without question that the use of oseltamivir (Tamiflu®) will increase exponentially. Accompanied with the increased use of oseltamivir, the number of patients experiencing associated adverse reactions can be anticipated.

**Case:** A 52-year-old African American woman with a past medical history of hypertension, cocaine abuse, heart failure with an ejection fraction of 40%, diabetes mellitus, and end stage renal disease presented to the emergency department complaining of a dry cough, increasing shortness of breath, general body aches, and a subjective fever. She reported having been exposed to a family member diagnosed with influenza. At the time of admission the patient had a temperature of 102°F, a dirty diaphoresis, port dressing, clear lung fields and a negative rapid flu test. Her admit platelet count was 176 x10⁹/µL and white blood cell 7.4 x10⁹/µL. The patient was given intravenous vancomycin and held for observation. Within 12 hours of admission, the patient began experiencing respiratory failure and was transferred to the intensive care unit. A computed axial tomographic scan of her chest revealed a rapidly progressive pneumonia. The patient was started on fondaparinux and oseltamivir 75 mg twice a day, after which the patient steadily developed leukopenia and thrombocytopenia (platelets count 78 x10⁹/µL). Heparin-induced thrombocytopenia (HIT) was suspected and the anti platelet antibody and coagulation panels were sent; however, laboratory results did not support the diagnosis of HIT. The literature on oseltamivir was reviewed and this was considered a possible cause for the thrombocytopenia. The oseltamivir was discontinued after four days, and both the white blood cell and platelet counts began to rise.

**Discussion:** Several adverse reactions to oseltamivir have been identified, the most common (~10%) being nausea and vomiting. Other less common (<1%) adverse reactions include: anaphylactic/anaphylactoid reaction, arrhythmia, confusion, dermatitis, diabetes aggravation, eczema, erythema multiforme, hepatitis, neuropsychiatric events (self-injury, confusion, delirium), rash, seizure, Stevens-Johnson syndrome, swelling of face or tongue, toxic epidermal necrolysis, and urticaria. Reports from the Japanese Pharmaceuticals and Food Safety Bureau suggest that thrombocytopenia as well as leukopenia and acute renal failure be added as adverse reactions. These findings have not been adopted by the United States. Once oseltamivir was discontinued, our patient’s thrombocytopenia improved. Our case supports the developing literature that thrombocytopenia can be an adverse effect of oseltamivir use.

**Staying the Course.**

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**Case:** A 51-year-old man presented with a one-week history of back pain and fevers. He attributed the back pain to heavy lifting at his new job, but did not have an explanation for the fever. He denied intravenous drug use but reported poor oral intake in the previous month, leading to a ten-pound weight loss. His vital signs were normal, and he was afebrile on presentation. On the day following admission, he noted a severe right-sided headache and photophobia. He had lymphadenopathy in the bilateral posterior cervical, right axillary, and bilateral femoral chains. There was no point tenderness in any portion of his spine. A complete blood count revealed a white blood cell count of 2,000 cells/µL, platelets of 90,000 cells/µL, and normal hemoglobin. A peripheral smear revealed the presence of large platelets and Pelger-Huet cells. The hepatitis C antibody was reactive; all cultures showed no growth. A lumbar puncture was normal. Serology for human immunodeficiency virus (HIV) one and two were negative. A lymphnode biopsy failed to confirm the diagnosis of lymphoma. He was discharged with an anticipate lymphnode excisional biopsy. Five days after discharge, however, the HIV polymerase chain reaction was found to be positive with 6,190,000 copies/mL.

**Discussion:** General internists are often the first health professionals to provide care to patients with suspected HIV. The most common symptoms at presentation are fever and fatigue. Other common symptoms include rash, headache, lymphadenopathy, pharyngitis, myalgias, gastrointestinal symptoms, night sweats, leukopenia, and thrombocytopenia. Acute HIV should be considered in anyone with any combination of the above symptoms. Symptoms generally do not last longer than 14 days and rarely occur six or more weeks after initial exposure. The traditional tests to diagnose HIV, enzyme-linked immunosorbent assay and Western blots, do not become positive for three or four weeks after exposure and in some
patients can remain negative for up to three months to a year. Acute HIV syndrome is often mistaken for infectious mononucleosis, influenza, streptococcal pharyngitis, or viral hepatitis. In our patient, there was concern for myelodysplastic syndrome given the suppression of two cell lines and the irregularities on his peripheral blood smear. Accurate diagnosis of acute HIV syndrome requires a high index of suspicion after someone has a negative rapid HIV test and can both improve the lives of the affected patient as well as provide immeasurable public health benefits.

It’s In the Fever: Fever of Unknown Origin (FUO) as an Atypical Presentation of Sarcoidosis.

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Introduction: The list of potential etiologies of fever of unknown origin (FUO) is extensive, and it is an uncommon first presentation of sarcoidosis. In the work-up of FUO, evaluation is often directed toward an infectious, malignant or drug-induced cause.

Case: A 54-year-old woman with a history of rheumatoid arthritis and hypertension initially presented with fever, fatigue, abdominal pain, and weakness at an outside hospital (OSH). After persistent high grade fevers for seven days and elevated liver function tests with an abnormal ultrasound (thickened gallbladder with nonspecific pericholecystic fluid), she was transferred to our facility. Blood cultures and viral hepatitis serologies at the OSH were negative. At our hospital she underwent a laparoscopic cholecystectomy after further imaging was consistent with acalculous cholecystitis. There were no complications from the surgery and the patient’s abdominal pain resolved but she continued to have persistent high grade fevers, despite antibiotics. A cholangiogram done at the time of the cholecystectomy showed no evidence of obstruction; the elevated alkaline phosphatase peaked in the 700s (U/L). Blood cultures and purified protein derivative were all negative. Antibiotics were discontinued after no obvious source of infection could be identified. A computed tomographic scan showed mediastinal lymphadenopathy and bilateral atelectasis of the lungs. A gallium scan showed abnormal uptake in the lungs but the pulmonology team felt that the lung was unlikely the source of infection. No auto-immune or drug-induced etiology was found. A liver biopsy was done that showed non-caseating granulomas; therefore in the context of the clinical picture the patient was diagnosed with sarcoidosis. She was started toward an infectious, malignant or drug-induced cause.

Discussion: Sarcoïdosis typically presents with symptoms involving the lung such as cough and dyspnea or is found incidentally on chest radiograph; however, systemic symptoms such as fever can be the initial presentation. There may be a benefit to get an angiotensin converting enzyme level for screening in FUO, although this does not rule out sarcoidosis if negative. It is therefore important to keep sarcoidosis in mind in the evaluation of FUO, to ensure rapid diagnosis and subsequent treatment.

Just Another Day in the Fast Track...
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Introduction: Visual complaints can be frustrating to evaluate in the emergency department (ED), particularly in the urgent care setting. Obvious eye trauma is triaged rather quickly, but subtle complaints can become surprisingly emergent.

Case: A 55-year-old Spanish-speaking man with no past medical history presented to the fast track complaining of progressive loss of vision and pain in his right eye for three days. He stated that he had been working in a local tomato field while a plane sprayed an unknown chemical across the field. He denied headache or face trauma. Physical exam noted 20/25 vision in the left eye with complete loss of vision in the right eye. The orbital rim and extraocular muscles were intact, but the globe appeared enopthalmic. There was moderate subconjunctival hemorrhage, but no gross hyphema. A clouded cornea limited the fundoscopic exam. The left pupil was reactive with consensual reflex. A call to the local poison control center noted that sulfa-based agents had been sprayed in the region that week; the toxic effects were inconsistent with the patient’s history and exam. Bedside ocular ultrasound demonstrated an open globe, complete retinal detachment, lens dislocation, and question of a foreign body. Ophthalmology was emergently called and subsequently evaluated the patient, confirming our bedside evaluation. Intraocular pressure in the right eye was 70 mmHg and a computed tomographic scan confirmed the open globe, retinal detachment, and lens dislocation. The patient was given ceftriaxone, mannitol, and acetazolamide. The patient eventually admitted that he had been robbed two weeks prior and was knocked unconscious after a blow to the right eye. The patient was admitted for enucleation surgery the next day.

Discussion: Ocular ultrasound is being utilized with increasing frequency in the ED with good results. Several prospective, observational studies have noted high sensitivity (97%) and specificity (92%) for eye emergencies, such as retinal detachment. Some studies are supporting the use of ultrasound to indirectly measure intracranial pressure by measuring the optic sheath. This technique is easy to learn and adapted quickly for difficult situations.
Focal Segmental Glomerulosclerosis (FSGS): Tip Lesion Variant.
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Introduction: Tip lesion variant of focal segmental glomerulosclerosis (FSGS) is a rare glomerulopathy characterized by hypertension, hematuria, renal insufficiency, and nephrotic syndrome. FSGS has multiple pathologic variants, each with distinctive predictive outcomes and treatment plans. The tip lesion variant has shown higher renal survival and remission rates, making the pathologic diagnosis of FSGS sub-types clinically significant.

Case: A 21-year-old woman without a significant past medical history, presented with generalized swelling, progressive weight gain due to edema, and increased urinary frequency for one month. She reported heavy non-steroidal anti-inflammatory drugs use for two months and shortness of breath on exertion for one week. Physical exam was remarkable for generalized obesity (body mass index 36), bilateral lower extremity pitting edema, and abdominal wall edema. There was no hypertension. Urinalysis revealed 500 mg/dL protein, trace blood and red blood cells, moderate white blood cells, and a trichomons infection. Blood chemistry showed a creatinine within normal range (1.1mg/dL) and a glomerular filtration rate greater than 60mL/min. A 24-hour urine protein collection produced 8.5 grams of protein. A clinical diagnosis of nephrotic syndrome was made, and the patient was started on diuretic therapy. Trichomons infection resolved with antibiotics. Tests for human immunodeficiency virus, hepatitis, syphilis, autoimmune processes, complement levels, illicit drug use, and pregnancy were negative. Renal ultrasound showed a right kidney that measured 11.7cm by 4.6cm and a left kidney that measured 10.5cm by 5.8cm. Doppler studies on renal ultrasound showed no sonographic evidence of renal artery stenosis. During hospitalization, the patient responded to diuretic treatment with decreased edema and resolved dyspnea. An ultrasound guided renal biopsy was performed bilaterally. A total of 37 glomeruli were identified on pathologic examination of microscopic sections and special stains, including periodic acid-Schiff, trichrome, and silver stains. Eight glomeruli showed small zones of segmental sclerosis that involved the glomerular tufts localized to the ostia of the proximal tube, also known as the glomerular tip. Immunofluorescent staining of 10 glomeruli excluded immune complex disease. Electron microscopy of 10 glomeruli illustrated widespread effacement of podocyte foot processes and capillary loop obliteration with accumulation of lipid, hyaline, and foam cell hyperplasia. The pathologic findings were consistent with the diagnosis of FSGS, tip lesion variant, and high-dose glucocorticoid treatment was initiated.

Discussion: Although FSGS is a common cause of nephrotic syndrome in adults, this case illustrates the clinical importance of pathologic diagnosis of FSGS sub-types in determining disease prognosis and institution of appropriate therapy.

“We Would, and We Would Not” - A Tragic Case of Kell.
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Case: A 44-year-old African American woman was admitted for vaginal hysterectomy (VH) due to a four month history of menometrorrhagia despite medical management. Medical history was significant for systemic lupus erythematosus, well controlled on hydroxychloroquine sulfate, and hypothyroidism. Admit vital signs were unremarkable and her pre-operative hematocrit was 30.8%. She was A positive and her coagulation panel normal; however, she was found to have an anti-Js(b) antibody. The surgical team was informed that there was no appropriately typed blood in the hospital inventory. Due to the urgency of the patient’s condition a VH was performed without any initial complications. Hemostasis was assured at each step of the operation and blood loss was estimated to be 100mL. Post-operatively, she decompensated and hematocrit decreased to 19.3%. Exploratory laparotomy showed extensive bleeding from the surgical sites. A left oophorectomy and bilateral hypogastric artery ligation was performed. Due to extensive blood loss and critical status, she was resuscitated with products including 12 units Js(b)+ blood and monitored in the intensive care unit. Follow-up hematocrit was 40.8%. Clinical findings and serial labs were consistent with acute hemolytic transfusion reaction (AHTR). Due to severe heme pigment-induced acute tubular necrosis, continuous renal replacement therapy was initiated but was unable to be continued due to hypotension. Further evaluation showed no signs of lupus exacerbation or disseminated intravascular coagulation. Despite receiving appropriately typed blood, her anemia worsened. On post-operative day six, she succumbed to multisystem organ failure due to complications associated with AHTR.

Discussion: Js is a member of the Kell system. Considered a high-frequency antigen, it is seen on red blood cells (RBC) of nearly 100% of Caucasian and 99% of African descent individuals. Js phenotypes are not seen on RBC of Caucasians and only 1% of African descent individuals. Because of the rarity of this phenotype and a handful of reports, the severity of transfusing incompatible RBC to these individuals is unclear. Most adverse reactions ending in death are seen in neonates; however, adults appear to suffer from mild to moderate hemolytic anemia that resolves after supportive therapy. To our knowledge this is the first case of a Js individual receiving 12 units of Js+ blood at one time who eventually died due to AHTR. Given the uncertainty, physicians should err on the side of caution and assess the risk of withholding versus giving blood.

Acute Glomerulonephritis in the Diabetic Kidney.
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Case: A 52-year-old man with past medical history of diabetes, hypertension and gout presented with complaints of worsening shortness of breath over the past four weeks. He noted a productive cough and denied hemoptysis, fever, chills, chest pain, night sweats, rhinorrhea, asthma, bronchitis, or pneumonia. A chest X-ray revealed ill defined increased density over the left and mid lower lung field, a prominence of peri and infralbar lung markings, and his creatine was 2.7 mg/dL. A computed tomographic scan was positive for large and small pulmonary nodules and masses in association with right paratracheal lymphadenopathy. He also noted progressive hearing loss for two years and blurry vision. Serum creatinine was 3.6 mg/dL and urinalysis was positive for proteinuria and hematuria with moderate eosinophils. Renal ultrasound noted small nodules in the right kidney. The patient
Low back pain in adults is a common problem as SLE. Musculoskeletal pain and signs of obstruction may arise such as EBV, CMV, mycobacterium, and autoimmune diseases such as malignancies, lymphadenopathy from primary tumors, infections distribution that affects young adults and the elderly. Presenting malignancy, and autoimmune disorders. Hodgkin lymphoma (HL) should be thoroughly evaluated for the possibilities of infectious, symptoms such as fatigue, weight loss, and lymphadenopathy necessary to determine a diagnosis. Patients reporting systemic encoun-tered by internists. A comprehensive approach is

Discussion: Wegner’s granulomatosis was made and he was started on cyclophosphamide therapy.

Discussion: Wegner’s granulomatosis is a systemic necrotizing granulomatous vasculitis that affects the upper airways, sinuses, lungs, and kidneys. Renal involvement is the most ominous clinical manifestation; as end stage renal disease may develop within days to weeks. This is a case of acute glomerulonephritis in the setting of underlying diabetic kidney disease. Diagnosis requires a high index of suspicion and the recognition of acute nephritic syndrome.

A Challenging Course in Diagnosing Hodgkin Lymphoma.

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Case: A 20-year-old previously healthy African American man presented with one month of worsening lower back pain, a 30 pound weight loss, night sweats, fatigue, and bleeding from the gums. He was febrile and had palpable painless cervical, axillary, and inguinal lymphadenopathy. He had a platelet count of 13 and microcytic anemia. A magnetic resonance image of the lumbar spine revealed an L3 lytic lesion with associated soft tissue swelling and a moth-eaten lesion in the iliac bone. A biopsy of the iliac bone, inguinal lymph node, and bone marrow were non-diagnostic. Epstein-Barr virus (EBV)/ cyto- megalovirus (CMV) titers, and human immunodeficiency virus were negative. He had a positive antinuclear antibody level, anti-Smith antibody, and low complements and was treated as having Kikuchi’s disease, a rare subtype of systemic lupus erythematosus (SLE). However, he subsequently developed a large nasopharyngeal mass that compromised his airway, requiring tracheostomy for airway protection. Resection of the mass revealed nodular sclerosing Hodgkin’s disease, stage IV.

Discussion: Low back pain in adults is a common problem encountered by internists. A comprehensive approach is necessary to determine a diagnosis. Patients reporting systemic symptoms such as fatigue, weight loss, and lymphadenopathy should be thoroughly evaluated for the possibilities of infectious, malignancy, and autoimmune disorders. Hodgkin lymphoma (HL) is a commonly encountered malignant neoplasm with a bimodal distribution that affects young adults and the elderly. Presenting symptoms are vague and often mimic other hematological malignancies, lymphadenopathy from primary tumors, infections such as EBV, CMV, mycobacterium, and autoimmune diseases such as SLE. Musculoskeletal pain and signs of obstruction may arise as a consequence of progressively enlarging lymphadenopathy. Rarely, patients present with autoimmune disorders such as autoimmune hemolytic anemia, thrombocytopenia, or neutropenia. This patient demonstrated atypical features including fever and night sweats, which are observed in less than 20% of the younger population with HL as compared to older adults, where they are often always present. His initial work up also identified anemia and thrombocytopenia. With inconclusive biopsies, hematological disturbances, and serology supporting SLE, the diagnosis of HL was delayed until Reed-Sternberg cells were identified in the nasopharyngeal biopsy. Due to the variety of potentially severe pathology, patients presenting with a constellation of nonspecific systemic symptoms remain a challenge and internists must keep a high index of suspicion for malignant neoplasms.

Pulmonary Alveolar Microlithiasis.

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Introduction: Pulmonary alveolar microlithiasis (PAM) is a rare idiopathic disease with unknown etiology and pathogenesis. The diagnosis is usually made incidentally on radiological imaging. There are no definite treatments for this condition.

Case: A 73-year-old African American man with a history of asbestos exposure and chronic obstructive pulmonary disease (COPD) diagnosed in 2000 and maintained on home oxygen since 2004 presented to the emergency department with increasing shortness of breath. Initial chest radiography showed extensive bilateral deposits with a “sandstorm appearance”. Subsequent computed tomography of the chest revealed that his lungs were filled with multiple small calcifications and ground glass opacities with air bronchograms involving all lobes, consistent with diffuse alveolar microlithiasis. Arterial blood gas showed hypercapnic, hypoxemic respiratory failure. With these findings, the patient was placed on a 100% non-breather, aggressive pulmonary toilet and was started on treatment for presumed COPD exacerbation with nebulizers, antibiotics, and steroids with placement in the intensive care unit for close monitoring. The patient was also placed on bilevel positive airway pressure (BiPAP) due to his impending respiratory failure. During the hospital course, the patient began to show steady respiratory improvement with decreased oxygen requirement, weaned off BiPAP, and was switched to oral steroids and antibiotic. The patient was discharged home with home oxygen and pulmonary follow-up for his pulmonary alveolar microlithiasis.

Discussion: PAM is a rare idiopathic condition that may have familial predisposition. PAM is usually asymptomatic for many years to decades and often diagnosed incidentally on radiological imaging. This disease is characterized by widespread intra-alveolar calcium deposits throughout the lung. It has a classic “sandstorm” appearance on chest radiography. There are no definite treatment options, and it carries a poor prognosis in its late stage. Since PAM is an indolent disease, earlier manifestations of this condition can be mistaken for other common entities of pulmonary disease such as COPD as with the case presented here.

The Presence of One Should Suspect Another.

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Case: A 44-year-old woman presented with one week of headaches was admitted for further evaluation of pulmonary nodules and renal insufficiency. He quit smoking 25 years ago, with previous 24 pack a year history, denied alcohol, but had previous illicit drug use (last in 1980). He worked in construction since 1976. At the time of admission, his blood pressure was 150/84 mm Hg, pulse of 110 beats per minute, a respiratory rate of 20 per minute, a temperature of 98°F, and oxygen saturation was 93% on room air. Physical exam revealed bilateral crackles at the lung bases, and an erythematous and swollen third toe on his left foot. His serum creatinine continued to rise to a maximum of 6.9mg/dL during hospitalization. Urinalysis revealed hematuria and proteinuria. He was started on pulse solumedrol 1000 mg IV for presumed acute glomerulonephritis. On hospital day number four he underwent bronchoscopy, suggestive of alveolar hemorrhage. Bronchial washings were negative for malignancy, acid-fast bacillus and fungal elements. A perinuclear anti-neutrophil cytoplasmic antibody titer was positive at 1:640 (1-20). Kidney biopsy demonstrated necrotizing and crescentic glomerulonephritis. A diagnosis of Wegner’s granulomatosis was made and he was started on cyclophosphamide therapy.

Discussion: Wegner’s granulomatosis is a systemic necrotizing granulomatous vasculitis that affects the upper airways, sinuses, lungs, and kidneys. Renal involvement is the most ominous clinical manifestation; as end stage renal disease may develop within days to weeks. This is a case of acute glomerulonephritis in the setting of underlying diabetic kidney disease. Diagnosis requires a high index of suspicion for malignant neoplasms.
and blurry vision. She also complained of cold symptoms, unsteady gait, weakness, fatigue, diarrhea, fevers, rash, and lip and neck swelling. On past medical history she had a rash in 2008 diagnosed as impetigo. On head and neck exam she had periorbital swelling, left-sided submandibular lymphadenopathy, left-sided lip swelling, and cheliosis. Dermatological exam revealed desquamating 1 cm hyperpigmented, non-blanching macules disseminated over her entire body, most prevalent on the palms and soles. A computed tomographic scan of the head and magnetic resonance image of the brain were unremarkable. Her serum chemistries included a total protein 10.5 gm/dL, albumin 3.1 gm/dL, white blood cell 3.7 gm/dL, erythrocyte sedimentation rate 110, C-reactive protein 3.8 mg/dL, human immunodeficiency virus (HIV) enzyme-linked immunosorbent assay (+), HIV polymerase chain reaction 62,800 copies/mL, CD-4 count 100.6 units/mcl, Hep panel (+), rapid plasma reagin (RPR) non-reactive, RPR diluted to 1:16 non-reactive, fluorescent treponemal antibody absorption (FTA-ABS) reactive, cerebrospinal fluid (CSF) white blood cell 37 units/mcl, CSF red blood cell 12 units/mcl, CSF protein 40.3 units/mcl, and CSF glucose 58 units/mcl, and CSF-venereal disease research laboratory (VDRL) test mildly reactive when undiluted but when diluted to 1:2 it was non-reactive. The patient was given a new diagnosis of acquired immunodeficiency syndrome, with HIV confirmed by Western Blot and CD-4 count of < 200 units/mcl. She was also diagnosed with RPR seronegative neurosyphilis, confirmed by reactive FTA-ABS and CSF-VDRL in conjunction with neurological manifestations. She was treated as an inpatient with penicillin G 3,000,000 units intravenously every four hours for 14 days and started on Bactrim DS once daily.

Discussion: Although the prevalence of syphilis in the United States varies regionally, surveillance data reports that the vast majority of cases occur in the south. Epidemiological associations between syphilis and HIV infection have been documented in both United States and African populations, and when co-infection with HIV exists, accelerated progression through the syphilitic stages has been demonstrated. Concomitant immunosuppression, reduction in cell-mediated immunity, and meningeal inflammation are all suspected mechanisms for advanced clinical presentations. Consequently, early detection of treponemal infection in HIV patients is critical to preventing advanced disease. However, as in this case, false-negative serological tests for syphilis do occur in HIV co-infected patients due to a reduced humoral response, with a lack of B-cell activation to treponemal cardiolipin antigens. As a result, when clinical evidence strongly suggests the presence of syphilis and initial serological tests for syphilis – RPR and VDRL – are non-reactive, it is best to test for antibodies targeted towards the treponeme – FTA-ABS and microhemagglutination assay – or biopsy an available lesion, attempting to visualize spirochetes directly on dark field microscopy. In cases similar to this where neurosyphilis is suspected, either a RPR of 1:32 or neurological manifestations are sufficient indicators to warrant a lumbar puncture. In this patient, the diagnosis of syphilis infection with progression to neurosyphilis was made by obtaining a reactive FTA-ABS and a reactive CSF-VDRL, and proper treatment was initiated accordingly.

Still(s) A Dilemma.

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Case: A 45-year-old Hispanic man presented to the emergency department with a 10-day history of fevers, body-aches, sore throat, non-productive cough, and a rash. He was born in Honduras and was in Mexico at the onset of his symptoms, for which he sought medical treatment (he was treated with a cephalosporin for presumed strep throat) without relief. A chest X-ray showed bilateral pulmonary infiltrates; while blood cultures, sputum cultures, and throat cultures were all negative. Influenza A and B swabs and acid-fast bacillus smear also were negative. The patient initially had a very mild leukocytosis and a bandemia. He tested negative for heavy metal poisoning (a chest computed tomogram (CT) was suggestive of toxin exposure), histoplasmosis, coccidiosis, fungal infections, and human immunodeficiency virus. Erythrocyte sedimentation rate (ESR) was elevated, as was ferritin. He had thrombocytosis and a transaminitis. Abdominal ultrasound was negative for stones, fluid collections, or other abnormalities. An acute hepatitis panel was also negative. The rash was non-pruritic, and developed only with fever spikes (which were twice daily). His knees became edematous and painful with movement (active and passive) and palpation. He also complained of elbow and shoulder pain. Anti-streptolysin O titers, Rubella IgM, Neisseria gonorrhoeae/C. trachomatis deoxyribonucleic acid, antinuclear antibody (ANA) and rheumatoid factors were negative, as were circulating anti-neutrophil cytoplasmic antibody, perinuclear anti-neutrophil cytoplasmic antibody, and atypical-anti-neutrophil cytoplasmic antibody. Broad-spectrum antibiotics (including vancomycin, piperacillin-tazobactam, ciprofloxacin, and doxycycline) were not helping and were discontinued. Adult Still’s disease, a diagnosis of exclusion, was made and the patient was started on oral prednisone; his symptoms abated, his fevers ceased, and he was discharged with follow-up in a rheumatology clinic.

Discussion: Adult Still’s disease, also known as adult onset juvenile rheumatoid arthritis, is a rare disease with a bimodal peak of incidence. It is characterized by arthritis (most notably in the knees), an evanescent salmon-colored rash, quotidian to bi-daily fevers, and often has an associated transaminitis. ANA and rheumatoid factor tend to be negative, but ESR can be elevated. Further lab investigation may reveal an elevated ferritin level. To further support a diagnosis of Still’s disease, a glycosylated ferritin level can be obtained, which may be elevated. Bone marrow biopsy may show an increase in the amount of granular cells. Pulmonary infiltrates are another common finding, making the diagnosis that much more difficult.

A Case of Wolff-Parkinson-White Syndrome With Pre-Excitation Alternans.

A Njoku, J Parker, N Jain, and M Celebi.
Department of Internal Medicine, Louisiana State University Health Sciences Center, New Orleans, Louisiana.

Case: A 57-year-old Hispanic woman with a past medical history of hypertension, dyslipidemia, and symptomatic tachycardia presented to the hospital with chest discomfort. The patient woke up in the middle of the night with left-sided chest pressure that radiated to her left hand causing numbness and tingling. She reported that her chest pain was constant, 6/10 in severity, lasted all night and was associated with palpitations, diaphoresis, nausea, vomiting, and shortness of breath. She had experienced similar episodes of chest pain three times in the past two years. The patient was told she had an abnormal heart rhythm but no diagnostic tests were performed during her previous episodes. During this presentation, the patient was hypertensive and tachycardic but was in no apparent distress. Sublingual nitroglycerin and aspirin relieved the severity of her symptoms. Cardiac enzymes, metabolic profile, complete blood count, thyroid-stimulating hormone, and
A 44-year-old man with hypertension and diabetes presented with sudden onset of bilateral lower extremity weakness that started 10 hours prior to admission. His lower legs had become weak. He recovered seconds later, but his weakness returned, and he eventually became paralized. After a lumbar puncture, his upper extremities became weak, and he had difficulty urinating. He also complained of an occipital headache (5/10) that was worst with flexion. Light touch sensation and vibration on the dorsal surface of the feet was absent. Strength in the lower extremities was 0/5, and strength in the upper extremities was 3/5. His lower extremities reflexes were absent bilaterally and a positive Babinski’s sign was elicited. White blood cell count was 11.5 K/µL. Metabolic profile, urinalysis, inflammation screen, troponin, electrocardiogram, and computed tomogram of the head and spine were normal. His C - reactive protein= 150.3 mg/L, and his myoglobin was elevated at 267.6 g/dL. The cerebrospinal fluid was slightly xanthochromic, and results showed white blood cells= 7/CuMm, glucose= 58 mg/dL, red blood cells= 1/CuMm, and protein 452 mg/dL. Suspicious of possible neck injury, a magnetic resonance image (MRI) and magnetic resonance angiography (MRA) of the head and neck were ordered. While awaiting results, blood pressure dropped to 74/48 mmHg, and the patient was intubated for respiratory failure. Intravenous immune globulin (IVIG) was ordered initially to treat for Guillain-Barré syndrome. However, cervical MRI showed a collection of fluid anterior to the spinal cord between C3 to C6. The patient was transferred to the operating room for cruropectomy and disectomy with decompression and irrigation with vancomycin saline. The disks were cultured and grew Streptococcus agalactiae and Staphylococcus aureus, which were the same organisms that were found in a small 1 x 0.5 cm superficial ulceration on his left foot. The patient was started on vancomycin for six weeks, along with physical therapy. His neurological deficit improved slowly.

Discussion: Spinal epidural abscess can be difficult to recognize, especially when symptoms coincide with other neurological diseases such as Guillain-Barré. Diagnosis must be made promptly because delay in surgical decompression or antibiotics may result in irreversible neurologic damage or death. Even though fever, malaise, and back pain are the most consistent early symptoms, patients can present with acute severe neurological symptoms, such as paralysis. MRI with gadolinium should not be delayed if epidural abscess is suspected.

Nosocomial Infection Rates Among Pediatric Oncology Patients: A Retrospective Study Examining the Efficacy of Chlorhexidine. K Clay,1 C Velasco,2 and L Yu. 1Pediatric Hematology/Oncology, Louisiana State University Health Sciences Center/Children’s Hospital, New Orleans, Louisiana; 2Louisiana State University Health Sciences Center, Public Health, New Orleans, Louisiana

Background: Hematopoietic stem cell transplant (HSCT) patients are considered to be at the highest risk for contracting nosocomial infections (NI) among the already immunocompromised oncology population due to the nature of their treatments. Therefore, the additional preventative measure of routine daily bathing in the antimicrobial antiseptic topical wash Hibiclens® is often integrated as standard of care for these patients. The aim of this study was to examine the rate of nosocomial infections among HSCT pediatric oncology patients as compared to the general pediatric oncology patients in order to examine the efficacy of Hibiclens® as a prophylactic antimicrobial antiseptic.

Methods: This retrospective study examined all pediatric oncology inpatient admissions over an 18-month period at Children’s Hospital in New Orleans, Louisiana. Patients were classified into one of two groups: the non-transplant oncology group (functioning as the control group) and the HSCT (study) group. NI was defined as the presence of fever (temperature >38°C) >24 hours after admission, and/or presence of positive cultures obtained from bodily fluids (including blood, urine, and stool). Culture-confirmed infections were termed hospital-acquired infections (HAIs). Febrile patients without culture confirmation were classified as nosocomial fever of unknown origin (nFUO). The rate of infections was quantified as the incidence density (ID) for each respective group (# occurrences/100 days).

Results: Fifteen patients were eligible for the HSCT group, while 445 patients were included in the non-transplant oncology group. The overall infection incidence density in the control group was 1.98, and 1.10 in the study group (P=0.20). Within the examined
The management of meningitis in the setting of Extramedullary hematopoiesis is most likely to
A 30-year-old woman presented with one month of
patient's previously resected intracranial mass. The patient was
adenocarcinoma, identifying the primary lesion responsible for the
revealed interval progression of the previously noted right upper
malignant cells. Repeat CT scans of chest, abdomen, and pelvis
by PCR was negative, and CSF cytology failed to demonstrate
and histoplasmosis were unrevealing. Cerebrospinal fluid acid
extensive evaluation ensued. Studies for cryptococccal disease
Tuberculous meningitis, meningeal carcinomatosis, and fungal
revealed a CSF lymphocytic pleocytosis with a total protein of
the head revealed postoperative changes, and lumbar puncture
aforementioned complaints of headache and neck stiffness. CT of
lesion was planned, however the patient failed to return for
continued on anti-mycobacterial therapy with overall improvement,
and plans were made to initiate chemotherapy for lung carcinoma
following final cerebrospinal fluid AFB culture results.

Discussion: This case illustrates a very unusual natural history of
non-small cell lung cancer with brain metastasis and the diagnostic
dilemma posed by the presence of a lymphocytic pleocytosis in the
setting of untreated malignancy.

An Incidentaloma of Extramedullary Hematopoeisis.
J Duet and D Robledo
Department of Internal Medicine, Louisiana State University Health Sciences Center, New Orleans, Louisiana.

Introduction: Extramedullary hematopoeisis is most likely to
occur during fetal life; however, it can occur as a compensatory
mechanism in different types of anemia.

Case: A 56-year-old woman with a history of depression presented with a one week history of abdominal pain described as diffuse, sharp, intermittent, and a 3/10 on the pain scale. It lasted five to ten minutes during attacks with no radiation and was slightly worse with meals. She had one episode of nonbilious, nonbloody vomiting the day of presentation, decreased appetite secondary to pain, and a five pound weight loss over four months. She denied any changes in bowel movements, melena, or hematochezia. Mild tenderness to percussion of the epigastric area was present on exam. The vaginal and rectal exams were normal including stool being hemoccult negative. Laboratory values were significant for hemoglobin 5.6 g/dL, hematocrit 19.1%, platelets 128,000/µl, mean corpuscular volume 50.5 focal length, and red blood cell distribution width 32%. The differential was significant for 1% nucleated red blood cells and 1% immature mononuclear cells. Peripheral smear was consistent with anisocytosis, microcytes, target cells, tear drop cells, and dimorphic red blood cells. An iron profile revealed iron 5 µg/dL and percent saturation 1%. Esophagogastroduodenoscopy and colonoscopy revealed a nonbleeding, deep-cratered ulcer on the angularis of the stomach, chronic gastritis, and three sessile colon polyps (3-7mm in size). Biopsy of the stomach was consistent with chronic active gastritis with H. pylori organisms. Biopsies of the polyps revealed tubular adenomas. Coronary CT angiography (CTA) of the abdomen and pelvis revealed two low density structures within the bilateral liver lobes, mild splenomegaly and a heterogeneous mass in the pre-sacral region. Computed tomography (CT) guided biopsies the liver hypodensities showed normal bone marrow elements including maturing myeloid and erythroid components and megakaryocytes, consistent with extramedullary hematopoeisis. CT guided biopsy of the sacral mass was also consistent with extramedullary hematopoeisis.

Discussion: Extramedullary hematopoeisis presenting in multiple organs including pre-sacral masses have been reported in patients with hemoglobinopathies, most frequently, thalassemia. Further workup including electrophoresis and bone marrow biopsy may be required to determine if this patient has an underlying hematologic disorder.

A Grandulomatous Effusion.
H Herrington, JP Scoppetta, and D Patten
Department of Internal Medicine, Tulane University Health Sciences Center, New Orleans, Louisiana.

Case: A 30-year-old woman presented with one month of progressively worsening dyspnea on exertion. Her exercise tolerance had decreased to the point that she could barely take a few steps or even pick up her six-month old child. She also
Sarcoidosis is a common disease encountered by the general internist. The most common presentation is lymphadenopathy with or without erythema nodosum. Sarcoid, however, can affect the cardiac, pulmonary, gastrointestinal or nervous systems, even in the absence of lymph node or cutaneous involvement. Patients presenting with symptomatic cardiac involvement usually do so with conduction abnormalities, arrhythmias, and heart failure. Cardiac sarcoid may involve the pericardial space, inducing a pericardial effusion and tamponade. Corticosteroids are considered the mainstay of treatment at this point. Most of the literature supports starting prednisone at 30-40 mg a day, but the optimal dosage depends upon the patient’s response. Is It a Heart Attack or a Fungus? - Angioinvasive Aspergillosis Presenting as Acute Myocardial Infarction.

N Sharma, V Choudry, J Garcia-Diaz, and B Nasir
Departments of Internal Medicine and Infectious Disease, Ochsner Medical Center, New Orleans, Louisiana

Case: A 47-year-old African American man with a past medical history of alcohol-induced hepatic cirrhosis presented with acute midsternal chest pain of five hours duration. Respiratory distress developed on presentation and mechanical ventilation was required for airway protection. Initial work up showed markedly elevated cardiac enzymes with creatine phosphokinase 14000 U/L, elevated transaminases aspartate aminotransferase 800 U/L, alanine aminotransferase 210 U/L, total bilirubin 8 mg/dL, direct bilirubin 7 mg/dL, and ST segment elevation on inferior electrocardiogram leads. The patient underwent emergent left heart catheterization, which revealed patent coronary arteries. Subsequently, multi-organ failure resulted in decompensated shock and several vasopressors were needed to maintain adequate vital organ perfusion. Blood, spinal fluid, urine, and sputum cultures showed no growth. A blood and urine toxicology screen was negative. The patient had negative serology for human immunodeficiency virus (HIV), acute viral hepatitis, syphilis, dengue fever, tularemia, herpes virus 1 & 2, cytomegalovirus, Epstein-Barr virus, leptospirosis, Q fever, Lyme disease, brucellosis, and ehrlichiosis. The patient experienced intractable ventricular fibrillation which resulted in death after a 13-day hospital stay. Autopsy report revealed disseminated angioinvasive aspergillosis involving heart, lungs, bowel, thyroid, kidneys, and spleen in addition of complete occlusion of the posterior descending artery with a fungal thrombus and multiple fungal endocardial vegetations.

Discussion: Aspergillus organisms are ubiquitous, and exposure to their conidia must be a frequent event. However, disease due to tissue invasion with these fungi is uncommon and occurs primarily in the setting of immunosuppression. Risk factors for invasive aspergillosis include prolonged and severe neutropenia, hematopoietic stem cell and solid organ transplantation, advanced acquired immune deficiency syndrome, chronic granulomatous disease, and rarely cirrhosis. As is seen with other fungal infections, neutropenia and corticosteroid use are the most common predisposing factors. Invasive aspergillosis most commonly involves the lung, upper airways, and contiguous structures. Infection may disseminate beyond the respiratory tract in patients who are seriously immunocompromised, such as those on corticosteroids or stem cell transplant recipients. Infection of virtually any organ can occur, but most commonly the kidney, liver, spleen, and central nervous system are involved. Aspergillus is second only to candida as a cause of fungal endocarditis. Septic embolization has been occasionally reported as a reason for cerebral, myocardial, and pulmonary infarctions in patients with malignancies, bone marrow transplant, aplastic anemia, and lung transplant. Our report represents another rare case of myocardial infarction due to Aspergillus septic emboli in the setting of hepatic cirrhosis.

Giant Necrotic Ulcer: Invasive Gastric Mucormycosis.
R Bhanushali, SM Jameel, TG Gaines, and RM Muthuswamy
Department of Internal Medicine, University Medical Center, Louisiana State University Health Sciences Center, Lafayette, Louisiana

Introduction: Invasive zygomycosis (mucormycosis) has become a fungal infection with increasing clinical burden in recent years. It is caused by the common environmental fungal pathogen of the Zygomyctota division, commonly including Mucor and Rhizopus. Infections typically occur in immunocompromised individuals (ie, human immunodeficiency virus, leukemia, transplant recipients), with common sites of involvement including the nose, brain, and skin. Gastric zygomycosis is uncommon and can present with severe hemorrhage.

Case: A 52-year-old man with a past medical history of chronic obstructive pulmonary disease (COPD) (GOLD Stage IV) and osteoporosis presented to our hospital with increased sputum production and dyspnea. The patient was hospitalized for a COPD exacerbation, but eventually decompensated requiring prolonged mechanical ventilation. His intensive care unit stay was complicated by several episodes of sepsis and Acinetobacter and pseudomonal pneumonia. An aggressive multi-drug regimen (moxifloxacin, linezolid and imipenem) was initiated, targeting the various microorganisms implicated. After several weeks, it was noted the patient was becoming progressively pancytopenic (white blood cells 2.6, hemoglobin 8.4, hematocrit 24.3, platelet count 17) with large amounts of blood regurgitating from his nasogastric tube. An esophagogastroduodenoscopy was performed which
Gastrointestinal mucormycosis is an unusual presentation for invasive zygomycosis and typically has a very poor outcome. Common sites of involvement include the stomach followed by the colon. Invasive zygomycosis, if unchecked, follows a course of vascular invasion, microthrombosis formation, and progressive ischemia that lead to the classic large necrotic ulcer. These ulcers can lead to perforation and devastating hemorrhage. Although typically an opportunistic pathogen that infects the immunocompromised, subtle host factors also play a role in its pathogenesis. In this case, poor nutrition, prolonged corticosteroid use, and perhaps most notably, nasogastric tube ulceration may possibly have made some contribution. This case highlights an unusual nosocomial infection, but one for which an increasing number of intensive care unit patients may be susceptible.

**Discussion:** Gastrointestinal mucormycosis is an unusual presentation for invasive zygomycosis and typically has a very poor outcome. Common sites of involvement include the stomach followed by the colon. Invasive zygomycosis, if unchecked, follows a course of vascular invasion, microthrombosis formation, and progressive ischemia that lead to the classic large necrotic ulcer. These ulcers can lead to perforation and devastating hemorrhage. Although typically an opportunistic pathogen that infects the immunocompromised, subtle host factors also play a role in its pathogenesis. In this case, poor nutrition, prolonged corticosteroid use, and perhaps most notably, nasogastric tube ulceration may possibly have made some contribution. This case highlights an unusual nosocomial infection, but one for which an increasing number of intensive care unit patients may be susceptible.

**Dial “S” For Stent.**
SM Ryals and CS Miller
Tulane University Medical School

**Case:** A 32-year-old man with a history of severe hypertriglyceridemia presented to an outside facility after a bout of pancreatitis. He was found to have a pancreatic pseudocyst at the time. After a few days of conservative treatment, he remained symptomatic with severe nausea and epigastric pain. Imaging revealed that the pseudocyst had enlarged and he was transferred for endoscopic therapy. He was afebrile, had a pulse of 126/min, respiratory rate of 22/min, blood pressure of 108/69 mmHg, and an oxygen saturation of 96% on room air. Exam was significant for tachycardia and a slightly distended abdomen without rebound tenderness or rigidity. Endoscopic retrograde cholangiopancreatography (ERCP) revealed a pancreatic pseudocyst communicating with the main pancreatic duct. A 9 cm 5 French stent was placed for transpapillary drainage. After four days, his symptoms continued to worsen and his hematocrit dropped. Computed tomography (CT) of the abdomen revealed a significant interval increase in pseudocyst size with contents characteristic of simple fluid, and no fluid collection (retroperitoneal or otherwise) to account for the decreased hematocrit. Endoscopic ultrasound (EUS) of pancreas identified two echogenic layers within the cyst, one thought to be clotted blood that had appeared as simple fluid on CT. A longer, 15 cm stent was placed via endoscope and active drainage was visualized. Four days later, abdominal ultrasound revealed considerable debris consistent with hemorrhage within the further-enlarged pseudocyst. The debris was determined to be too thick to drain via stent, and went for surgical removal.

**Discussion:** Endoscopic transpapillary drainage is the treatment of choice for pancreatic pseudocysts that communicate with the pancreatic duct. The endoscopic alternative to the transpapillary approach is transmural drainage, via cystogastrostomy or cystoduodenostomy. Until recently, open surgical drainage into the stomach or duodenum had been the procedure of choice. Recent studies have shown endoscopic intervention to be as safe and effective as surgery. It is important for the internist to recognize that surgery is no longer the only option. In many instances, surgery should be reserved for patients who fail minimally invasive alternatives, such as in our patient.
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Tropical Pulmonary Eosinophilia: A Commonly Underdiagnosed Cause of Chronic Cough in Immigrants.

A Sasapu, S Mani, B Lo, and P Kumar
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Introduction: Tropical pulmonary eosinophilia (TPE) is a common cause of chronic cough in tropical countries where parasitic infections are prevalent. TPE is increasingly seen in people who migrated to the United States from endemic countries like India and other tropical countries.

Case: A 28-year-old man was referred by his primary care physician to the allergy clinic with a four month history of cough and dyspnea on exertion preceded by clear rhinorrhea and nasal congestion. Although the rhinorrhea and congestion resolved after two weeks, the cough gradually worsened over the next eight weeks with nocturnal wheezing and post-tussive emesis. The cough and dyspnea on exertion were refractory to guaifenesin, mucinex, dextromethorphan, hydrocodone, nasal fluticasone spray, and albuterol inhaler. One month before the cough started, he reported exposure to a patient with pertussis for which he took azithromycin. He denied fever, chest pain, or headaches. His travel history included a four week stay in a rural village in south India two months prior to the onset of symptoms. His past medical history was significant for two episodes of filarial epididymo-orchitis. He denied smoking, use of illicit drugs or alcohol abuse. Vital signs and physical exam were unremarkable except for occasional wheezes and cough upon deep inspiration.

Labs were significant for white blood cell 55,000/mm$^3$, eosinophils 30,000/mm$^3$, IgE-3000 IU/mL. Anti-filarial IgG and IgE antibodies were positive at high titers. Anti-strongyloides antibodies were weakly positive. Ascaris IgE and Aspergillus IgG were negative.

Discussion: This patient had all the clinical findings suggestive of cardiogenic shock due to acute myocardial infarction, however, her cardiogenic shock was due to myocardial stunning caused by a massive surge of catecholamines that were released after needling the adrenal mass. Recent database analyses have suggested that most stress-induced cardiomyopathy is related to acute surges of catecholamines triggered by emotional or physical stress. Our case is unique because the cause of the catecholamine surge was from an undiagnosed pheochromocytoma. Our patient had a full recovery of cardiac function in 24 hours which highlights the point that stress-induced cardiomyopathy is transient and reversible.

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Pertussis direct fluorescent antibody was negative. Chest X-ray showed mild non-specific interstitial changes at the lung bases. Cat scan chest revealed mild peripheral interstitial thickening at the bases bilaterally. Pulmonary function tests demonstrated a mild restrictive pattern with no significant post bronchodilator response. The patient was diagnosed with TPE and successfully treated with diethylcarbamazine (DEC) 2mg/kg/dose three times a day for three weeks.

Discussion: TPE is a hypersensitivity reaction to filarial worms namely Wuchereria bancrofti and Brugia malayi. Pulmonary involvement is the hallmark for this condition. It is usually characterized by pentad of chronic paroxysmal nocturnal cough, wheezing, shortness of breath, elevated serum IgE (>1,000 IU/mL), and peripheral eosinophilia (> 3,000/mm³). The detection of high titers of anti filarial IgE and IgG antibodies, favorable response to DEC treatment, and the absence of microfilaria in the blood confirm the diagnosis.

Fatal Myocardial Toxoplasmosis.
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1Department of Internal Medicine, 2Department of Infectious Diseases, Ochsner Clinic Foundation, New Orleans, Louisiana

Introduction: Toxoplasmosis is an infection found worldwide and caused by the parasite Toxoplasma gondii. Immunocompetent persons with primary infection are usually asymptomatic, but latent infection can persist for the life of the host. In immunosuppressed patients, especially those with acquired immunodeficiency syndrome (AIDS), the parasite can reactivate and cause disease, usually when the CD4 lymphocyte count falls below 50 cells/µL.

Case: A 54-year-old woman with a history of well-controlled hypertension presented with severe dyspnea at rest. She was in her usual state of health until one week prior to presentation, when she developed exertional dyspnea. Her medications included benazepril and hydrochlorothiazide. Physical examination revealed a well-nourished, afebrile Caucasian woman who was tachycardic (128 beats/min), tachypnic (28 breaths/min), and hypotensive (88/41 mmHg). She was diaphoretic with cool and clammy extremities. Her laboratory values revealed compensated metabolic acidosis, elevated troponin (15 ng/mL), and elevated creatine phosphokinase (310 U/L). An electrocardiogram revealed sinus tachycardia with low voltage. The patient underwent cardiac catheterization and intra-aortic balloon pump placement. Angiogram and ventriculogram revealed patent coronaries with severely depressed ejection fraction of 15%. Right heart catheterization showed mean arterial pressure: 80 mmHg; pulmonary artery pressure: 26/19 mmHg; central venous pressure: 16 cm H₂O; and cardiac index: 1.8 L/min/m². Initial diagnosis was cardiogenic shock due to nonischemic cardiomyopathy. The patient was transferred to a tertiary cardiac center for ventricular assist device (VAD) placement and heart transplant evaluation. As part of the transplant evaluation she tested positive for the human immunodeficiency virus (HIV), with a CD4 of 24 cells/µL and detectable immunoglobulin G levels for T. gondii. During placement of VAD an intraoperative myocardial biopsy was performed, which showed moderately intense cardiac toxoplasmosis with significant destruction. The patient’s T. gondii immunoglobulin M was undetectable, and deoxyribonucleic acid (DNA) amplification by polymerase chain reaction (PCR) was negative. Irreversible shock ensued and resulted in death due to multiorgan failure.

Discussion: Patients with AIDS and <100 CD4 cells/µL who are toxoplasma seropositive have an approximately 30% probability of developing reactivated toxoplasmosis if not receiving effective prophylaxis. The most common site of reactivation is the central nervous system. The prevalence of extracerebral toxoplasmosis among AIDS patients is 2%-13%, while ocular involvement has been reported in up to 50% and cardiopulmonary in 12%-26%. DNA amplification by PCR does not have a high sensitivity (23%-78%). Mortality is nearly 100%, almost all reported patients died secondary to cardiogenic shock, as was the case in our patient.