

**New York Chapter ACP
Annual Scientific Meeting
Poster Competition**

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699 Westchester Avenue

Rye Brook, New York

**New York Chapter ACP
Annual Scientific Meeting**

Medical Student Clinical Vignette

Medical Student Clinical Vignette

Author: Rani Berry

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Institution: Albany Medical College

Title: NON-RELAPSING SYSTEMIC CAPILLARY LEAK SYNDROME STATUS POST MONOTHERAPY THEOPHYLLINE THERAPY

Introduction

Idiopathic systemic capillary leak syndrome (SCLS), also known as Clarkson's disease, is an extremely rare disease whose current molecular etiology remains unknown despite a 26% increase in published cases since 2006.¹

Since its discovery in 1960, there have only been 250 recorded cases of SCLS in the literature.

Patient:

A 24-year-old Hispanic female, with a medical history of aplastic anemia, gastroschisis, short gut syndrome, and CKD. Past medical history includes more than 100 admissions for abdominal pain with resulting diagnoses ranging from blind loop syndrome, SBO, and small-intestinal bacterial overgrowth (SIBO). In 2007, she began presenting with episodes of localized edema further complicated by pericarditis, midbrain hemorrhages, and seizures. For this admission the patient presented with fatigue, and lower extremity swelling and discomfort. Physical exam showed a blood pressure of 80/50 at time of admission. The patient had mild swelling of her labia and lower extremities, extending up to the thighs, which rapidly transitioned to a generalized edema. Labs showed an album of 3.6 mg/dl, a BUN of 24 mg/dl and creatinine 1.57 mg/dl consistent with her baseline renal insufficiency. The rest of her lab data was at baseline. The consideration for SCLS was based upon her multiple presentations of spontaneous bouts of generalized edema, along with the sudden presentation of hypotension. The diagnosis was confirmed by 1) An equally spontaneous remission of edema and hypotension consistent with the recruitment phase of SCLS, 2) A response to a therapeutic trial of theophylline treatment.

Conclusion:

Patients with SCLS usually present with episodes of unexplained edema, hypoalbuminemia and fluctuation in blood pressure.

Patients frequently experience SCLS relapses despite being on combination theophylline, IVIG or IV aminophylline therapy.

To our knowledge, this is the first reported case of a young patient diagnosed with SCLS and has not experienced a relapse in her symptoms since her initiating treatment with theophylline. Our goal is for physicians to be aware of this condition and the possibility of mono-therapy with theophylline as a safe and effective treatment for SCLS.

Clinical Significance:

This novel case will aid physicians in the workup and treatment of symptoms suggestive of systemic capillary leak syndrome. It offers a new opportunity of mono-therapy for SCLS leading to an increase in patient satisfaction and quality of life. It also provides a thorough review of SCLS and other rare but important diagnoses to consider when evaluating critically ill patients who present with episodic symptoms -reducing the traditional delay in diagnosing patients.

Druey, KM. Narrative Review: The Systemic Capillary Leak Syndrome. *Annals of Internal Medicine* Ann Intern Med. 2010;153(2):90.

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Title: Uncommon Presentation of Walled off Pancreatic Necrosis Secondary to Acute Pancreatitis

Walled-off pancreatic necrosis (WON) is a complication of acute pancreatitis that occurs in 10% of the population. Classically WON presents with constitutional symptoms, abdominal pain, and signs of biliary tract obstruction. Uncommon presentations include shortness of breath with normal serum pancreatic amylase and lipase levels. In this case report we hope to bring awareness of such complication.

A 21-year-old, morbidly obese, African American male, with medical history of acute pancreatitis, diabetes mellitus type 1, and hypertension, presented due to shortness of breath and vomiting for 1 day. The SOB occurred at rest, was unrelated to position changes and exacerbated with exercise. He denied alleviating factors for his SOB. The vomitus was non-bilious, non-bloody and associated with food intake. He denied fever, chills, cough, and sputum production. Patient admitted to being non-compliant with his medications. He was hospitalized a month ago for acute pancreatitis and diabetic ketoacidosis, which were conservatively managed. On current visit, his temperature was 98F, BP 146/89, pulse 118bpm, respiration rate 16bpm. Mild epigastric tenderness was noted on deep palpation. Laboratory values revealed D-dimer levels of 93U/L but pulmonary embolism was ruled out by CT chest angiography. Serum pancreatic amylase (91U/L) and lipase (36U/L) were normal, but alkaline phosphatase (94 U/L) and gamma-glutamyl transpeptidases (65U/L) were increased. CT of the abdomen revealed numerous large multi-loculated fluid and air collections surrounding the pancreas. These findings suggested WON. Culture of the abscesses revealed *Klebsiella pneumoniae* and yeast. Management included percutaneous CT-guided drainage of pancreatic abscesses and the patient was treated with Mycamine 100mg IV, Flagyl 500mg IV, Merrem Parenteral 1000mg IV. The patient was further educated about maintaining a healthy diet with exercise and being compliant with his medications. The remainder of hospitalization was uneventful.

Acute pancreatitis has become the leading gastrointestinal cause of hospitalization in the United States. Consequently, it is important to recognize WON as a significant complication of acute pancreatitis. WON consists of encapsulated collections of pancreatic necrosis with liquid and solid elements. Forty percent of cases resolve without intervention, but obstruction or perforation may occur that requires immediate medical intervention. WON is often seen in patients in their 5th-6th decade of life. Symptoms include abdominal pain, biliary obstruction, and vascular occlusion. Diagnosis should involve PMH of acute pancreatitis, an encapsulated collection on imaging, and elevated amylase in cyst fluid. In our case, the patient was young and presented with an uncommon presentation of shortness of breath. In this circumstance, it is important to take a thorough examination or else a misdiagnosis may lead to adverse complications, such as fistula formation or GI bleeding. With an increase in prevalence of acute pancreatitis, we feel all clinicians should be aware of walled-off pancreatic necrosis as a differential.

Medical Student Clinical Vignette

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Title: DELAYED DIAGNOSIS OF NEW ONSET FULMINANT ULCERATIVE COLITIS IN A PREGNANT WOMAN

Ulcerative Colitis is a relatively common condition, however, it is rare as a new diagnosis during pregnancy and post-partum periods with only five reported cases. We present a case of the delayed diagnosis of fulminant ulcerative colitis with toxic megacolon in an otherwise healthy pregnant woman.

A 41 year-old gravida 2, para 1 woman with no past medical history presented with abdominal pain and diarrhea starting at 34 weeks of her pregnancy. She was managed for presumptive early labor. At 37 weeks, she was hospitalized and spontaneously delivered a healthy baby via vaginal delivery; however, the abdominal pain and diarrhea persisted. She became hypotensive, tachycardic, and lethargic. Her abdomen was diffusely tender and distended with hypoactive bowel sounds. Edema was noted in all extremities. Initial laboratory results were positive for *Clostridium difficile*. She was treated with intravenous metronidazole, oral vancomycin, and oral fidaxomicin, without improvement. She continued to have approximately 10 episodes of watery, intermittently bloody diarrhea per day. Repeat *Clostridium difficile* testing was negative. CT scan of the abdomen was notable for pancolitis and cobblestoning. Colonoscopy revealed cryptitis with cryptic abscesses.

She was transferred to a tertiary care center for evaluation for fecal transplant. Laboratory data revealed hyponatremia (131 mEq/L), hypoalbuminemia (1.1 mg/dL), elevated CRP (4.8 mg/L), and anemia (Hgb 9.9 g/dL). After a third test for *Clostridium difficile* was negative, a CT scan was repeated and revealed toxic megacolon with dilatation of the transverse colon greater than 8 cm. Biopsy from a repeat colonoscopy was consistent with ulcerative colitis. She was managed with intravenous corticosteroids and infliximab, sparing the need for colectomy. Her symptoms resolved completely and she was discharged home after 44 days.

Pregnancy and postpartum states can mask serious and unrelated complaints leaving patients undiagnosed, untreated, and at risk for worse complications. Diagnosis of new onset inflammatory bowel disease during pregnancy can be particularly difficult because many symptoms are nonspecific and can be encountered during a normal pregnancy. Outcomes tend to be poorer most likely due to delayed diagnosis. This patient additionally did not fit the usual age distribution for the onset of inflammatory bowel disease, which peaks between age 15-35, and again over 50 years of age. Lastly, positive *Clostridium difficile* testing likely delayed the diagnosis and treatment of ulcerative colitis. The lack of clinical improvement with appropriate *Clostridium difficile* treatment prompted reconsideration of the presumptive diagnosis.

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Title: NEUROSYPHILIS LURKING IN THE BACKGROUND OF AN EPILEPTIC PATIENT

Case:

A 60 year old male with past medical history of dementia, hepatitis C and epilepsy on Levetiracetam and Divalproex Sodium presented to the hospital after he fell out of bed with tonic seizure with rapid eye movement. Initial physical exam on arrival at the hospital showed left upper and lower extremity weakness. Patient was brought to the hospital and patient was able to communicate but then had another episode of seizure in the ED. Labs were drawn and valproic acid levels were therapeutic, CPK was elevated and RPR was negative. Neurology evaluated patient and EEG was done which showed moderate diffuse encephalopathy. CT head was done which showed no acute pathology. Patient continued to have seizure and was sent to seizure center for video EEG which showed focal status epilepticus originating from the right frontal region. Patient was started on Clobazam for the seizures. When the patient came back from the seizure center patient continued to be lethargic. CXR showed middle lobe infiltrate and patient was started on Ceftriaxone and Metronidazole. Two days later patient had another fever so lumbar puncture was done and was VDRL quantitative reactive and patient was started on treatment for neurosyphilis.

Discussion:

The above patient had numerous admissions for epileptic seizures over the last year but never had lumbar puncture performed to confirm neurosyphilis. Tertiary neurosyphilis can present as general paresis (which can present as severe dementia) and Tabes Dorsalis (sensory ataxia, severe pain, and the Argyll-Robertson pupil [small, contracts to accommodation and convergence but does not respond to light]). A diagnosis of neurosyphilis is based on clinical suspicion and CSF fluid examination. A Patient with known history of syphilis presenting with neurological symptoms a lumbar puncture should be performed. Blood tests for syphilis include nontreponemal tests such as the rapid plasma reagin (RPR) and venereal disease research laboratory (VDRL) testing. Serum treponemal tests include the Fluorescent treponemal antibody absorption (FTA-ABS) and syphilis enzyme immunoassays (EIAs). Treatment regimens include IV Penicillin G 3-4 million units every 4 hours for 10-14 days or IM Penicillin G 2.4 million units daily and Probenecid (500mg orally four times a day for 10-14 days). Alternative treatments include Ceftriaxone 2g IV daily for 10-14 days. Success of treatment is based on resolution or stabilization of clinical/CSF abnormalities. Repeat LP should be performed every 3-6 months until WBC count is normal and VDRL is non-reactive. Patient should be retreated for neurosyphilis if VDRL does not decline by fourfold from initial value, or becomes non-reactive if initial titer is <1:2 1 year after initial treatment.

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Institution: Jacobi Medical Center/ Albert Einstein College of Medicine

Title: A CASE REPORT OF ACUTE PANCREATITIS FOLLOWING INFLUENZA VACCINATION

Introduction: Influenza virus is a global problem affecting 25 to 50 million people each year and can cause serious illness particularly in the elderly (≥65 years) and children (<2 years). The CDC recommends routine annual vaccination for individuals aged ≥6 months without any contraindications. One barrier to administering the vaccine is the concern for possible adverse effects. The safety of the inactivated vaccine has been well established. Adverse events are usually mild and include soreness and erythema at the injection site; systemic side effects like fever and arthralgia are less common. Various vaccines have been linked to pancreatitis, including those against combined hepatitis A and B, hepatitis A, MMR and monovalent typhoid and cholera. To our knowledge, there have been only a few reported cases of acute pancreatitis associated with the influenza vaccine. We present a case of a patient presenting with acute pancreatitis following administration of the inactivated influenza vaccine.

Case: A 58-year-old Dominican woman was admitted in February 2016 at Jacobi Medical Center for acute epigastric abdominal pain associated with nausea, vomiting and diarrhea. Symptoms began approximately 8 hours after receiving the flu vaccine, administered as part of routine follow up at her PCP's office. She had a history of type 2 diabetes, hypertension, hyperlipidemia, and osteoarthritis. Her usual medications included glimepiride, nifedipine, alendronate, and calcium plus vitamin D supplements. The patient reported a history of genetic "liver disease" in her family but was unable to elucidate further. She denied alcohol use and had no history of cholelithiasis. Her exam revealed tenderness to palpation of the epigastric area. Labs showed a serum lipase of 215 U/L, AST 621 U/L, ALT 348 U/L, and triglycerides 257 mg/dL, consistent with acute pancreatitis. AST and ALT obtained just prior to vaccine administration the same day were within normal limits. A RUQ abdominal ultrasound, performed instead of a CT scan because of radio contrast allergy, showed gallbladder distension without evidence of cholelithiasis or biliary tract dilation. The patient was kept NPO and received IV fluid hydration and analgesics. Her symptoms resolved within hours and lab abnormalities within days.

Discussion: We present a case of acute pancreatitis that occurred within hours following influenza vaccination. The influenza vaccine has proven to be safe with few minor side effects, unlike other vaccines that have been associated with pancreatitis. We have found only two prior reports of a temporal association between the influenza vaccine and pancreatitis. Although in the case presented, a direct causal relation between vaccination and pancreatitis cannot be established, it was highly suggested by the chronology of events. With increasing use of the vaccine and the ongoing influenza epidemic, acute pancreatitis should be recognized as a possible adverse effect of influenza vaccination.

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Title: SEPSIS-INDUCED TAKOTSUBO CARDIOMYOPATHY LEADING TO TORSADES DE POINTES

Background:

Takotsubo cardiomyopathy or stress-induced cardiomyopathy is described by sudden myocardial dysfunction that resembles an acute heart failure syndrome with an abrupt onset often attributable to physical or emotional triggers. Takotsubo cardiomyopathy is a rare, yet important differential diagnosis of acute coronary syndrome and has significant implications in clinical management at presentation and afterward.

Case Report:

We describe the case of a 51-year old man brought to the emergency department with the acute onset of chest pain and a subjective temperature. The patient was septic secondary to a urinary tract infection and his troponins were initially noted to be elevated. He was admitted to the coronary care unit, placed on non ST-elevation myocardial infarction protocol, and was treated with cefepime for his urinary tract infection. The next day, the patient had ventricular tachycardia which degenerated into torsades de pointes. He went pulseless during this episode and was direct current cardioverted. Cardioversion was successful and the patient had sinus tachycardia. He was then intubated to ensure appropriate oxygenation, and had a bedside echocardiogram revealing a low ejection fraction with outlet obstruction. He was initially on pressor support to maintain his mean arterial pressure. Over the following 48 hours, his sinus tachycardia slowed following administration of a beta-blocker, he was extubated and stable on 3 L/min of oxygen inhalation. He underwent a cardiac catheterization to evaluate for coronary artery disease and was found to have mild non-obstructive coronary artery disease with no further findings. On the day of cardiac catheterization, a transthoracic echocardiogram revealed a reduced ejection fraction (25-30%) with apical wall motion abnormalities consistent with a great likelihood of classic Takotsubo Cardiomyopathy, apical type.

Conclusion:

Takotsubo cardiomyopathy is a rare disorder presenting with symptoms similar to acute coronary syndrome. Though traditionally elicited by physical and emotional triggers leading to transient left ventricular dysfunction, our case suggests that it may also be triggered by a systemic bacterial infection and lead to severe QT prolongation and a malignant ventricular arrhythmia in torsades de pointes.

Medical Student Clinical Vignette

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Title: Scratching the Surface: Erythema Nodosum-like Lesion as a Cutaneous Manifestation of Giant-cell Arteritis

Case presentation:

A 72 year-old Caucasian female presented with a 12-day history of worsening scalp pain, generalized weakness and muscle aches, stiffness of all extremities and a one-day history of rash and jaw pain. Her physical exam was notable for bilateral tenderness of the temporal area and multiple erythematous, tender spherical nodules on the medial aspect of the right arm. She had normal strength and reflexes and no joint abnormalities. Lab tests revealed elevated ESR (88 mm/hr) and CRP (35.7 mg/dl), leukocytosis (WBC 14.9x10³/L), hypokalemia (2.5 mmol/L), and normal CPK. Rheumatology and viral panels were unremarkable. She was evaluated for giant-cell arteritis with polymyalgia rheumatica. The arm rash was speculated to be erythema nodosum (EN) despite its atypical anatomical location. She was started on prednisone 60 mg daily and her symptoms significantly improved after two treatment doses. Complete resolution of the rash was achieved after the third prednisone dose. Temporal artery biopsy confirmed transmural chronic inflammation consistent with giant-cell arteritis.

Discussion:

Giant-cell arteritis is a vasculitis of medium- and large-sized vessels primarily affecting the aorta, its major branches, and extracranial branches of the carotid arteries. Some common manifestations include headache, tenderness in the temporal arteries, jaw claudication, visual disturbance, and symptoms of polymyalgia rheumatica. Less commonly seen are skin manifestations, most of which consist of scalp ulcers or necrosis resulting from cranial artery occlusion. EN-like rash has also been described in two case reports (n=4). All four patients had EN-like lesions on the lower extremities. One patient had biopsy-proven EN and another had subcutaneous multinucleated giant cell vasculitis on histology. Here we present a case of EN-like lesions of the arm as a dermatologic manifestation of giant-cell arteritis.

EN is the most common type of panniculitis, involving inflammation of the septa of subcutaneous fat lobules without vasculitis. It manifests as painful, erythematous nodules that are poorly demarcated, non-ulcerative, and more easily palpated than seen. Classically involving the pretibial region bilaterally, the lesions can be expressed simultaneously in the upper extremities, trunk, thigh, or ankle. While its cause is often idiopathic, EN is commonly an indication of underlying systemic disease. Classic cases of EN can be diagnosed clinically, while atypical cases may warrant biopsy. However, our patient's rash as well as her symptoms of giant-cell arteritis and polymyalgia rheumatica responded rapidly to prednisone, so further dermatological investigation was deemed unnecessary. Despite the atypical location, the patient's rash appeared consistent with EN—multiple erythematous and tender nodules without ulceration or scarring that are more easily palpated than visualized, manifesting in the setting of a systemic disease. Therefore, rashes suggestive of EN-like lesions should prompt consideration of giant-cell arteritis in the appropriate clinical setting.

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**Medical Student Public Policy &
Advocacy**

Medical Student Public Policy & Advocacy

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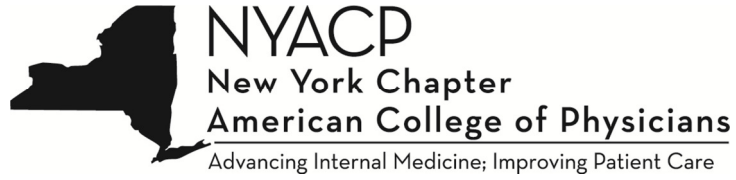
Title: A MEDICAL STUDENT DEVELOPED AND RUN PROGRAM FOR HIV AND HCV SCREENING - ROUTINE INTERVENTION THROUGH SCREENING AND EDUCATION (RISE)

Purpose: The Brooklyn Free Clinic (BFC), the single student-run free clinic in Brooklyn offers an array of primary care, screening, medication and referral services. All programs at the clinic are developed and run by students. The Routine Intervention Through Screening and Education (RISE) program was developed to provide patients with comprehensive counseling and HIV/HCV testing in area of Central Brooklyn at the highest risk of transmission in New York City while training and educating students on becoming psychosocially competent patient advocates.

Methods: RISE counselors are medical student volunteers who conduct rapid HIV and Hepatitis C screening tests in primary care and community settings. They are trained to provide psychosocially competent counseling to patients facing negative or positive test results and to connect positive patients with medical care. By engaging high-risk groups in conversations about their social and sexual health, RISE volunteers work to prevent HIV and Hepatitis C through patient education and screening. Through a one-on-one approach, counselors also challenge social stigmas facing affected populations and promote a better understanding of these diseases on both the individuals and communities we serve. Currently the program is expanding to include a harm reduction counseling and syringe exchange component.

Results: In 2015 RISE conducted 278 HIV screenings and 234 hepatitis C screenings at the Brooklyn Free Clinic. Through socially appropriate and effective communication skills, RISE counselors have a 66% rate of engaging patients in HIV testing when counseled.

Conclusions: The program consistently works to advocate for those high-risk patients and populations through the development of programs which first identify at-risk populations, establish education and training for student providers, engage in dialogue with the individual and finally establish access to care for those who need it. The RISE program at the BFC will continue to strive for the patients of New York City and beyond.



**New York Chapter ACP
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Medical Student Research

Medical Student Research

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Title: HDAC Inhibition Mitigates PAI-1-Conferred Phenotypes in Squamous Cell Carcinoma and Hyper-Healed Cutaneous Wounds

Purpose: Squamous cell carcinoma (SCC) and hyper-healed cutaneous wounds (HHCWs), such as keloids and hypertrophic scars, together affect over seven million in the U.S. yet lack efficacious treatments. SCC and HHCWs show elevated expression of plasminogen activator inhibitor-1 (PAI-1), which drives the excessive cellular proliferation characteristic of both pathologies. Histone deacetylase inhibitors (HDACi) are a class of drugs recently shown to induce PAI-1-dependent growth arrest in ras-transformed renal epithelial cells; HDACi are particularly valuable agents for skin conditions due to their availability as topical ointments. We hypothesize that HDACi modulate PAI-1 expression to inhibit cellular migration and proliferation in skin cells, and that HDACi are thus suitable agents for abrogation of SCC invasiveness and resolution of HHCWs.

Methods: HaCaT keratinocyte skin cells were stimulated with growth factors (transforming growth factor- β 1, epidermal growth factor) to replicate in vivo induction of PAI-1 in vitro. Stimulated cells were treated with HDACi for six hours, then analyzed by cellular phenotype assays, Western blots for protein content, and immunofluorescence for protein identification. Cells were additionally transfected with anti-PAI-1-siRNA for PAI-1 knockdown and analyzed by Western blot.

Results: HDACi treatment augmented intracellular PAI-1 levels while paradoxically mitigating cellular migration and proliferation; extracellular PAI-1 levels were unaffected. Exogenous application of PAI-1 was not sufficient to induce the same phenotypic changes. HDACi-induced PAI-1 also reduced activation of signal transducer and activator of transcription-3 (STAT3), a key migratory molecule that has not been previously studied in association with PAI-1. Western blotting revealed amplified STAT3 activation following PAI-1 knockdown. Cells transfected with dominant-negative STAT3 for constitutive STAT3 deactivation showed no change in PAI-1 levels.

Discussion: Cumulatively, we show that HDACi abrogate cellular invasiveness in in vitro models of SCC and HHCWs in a PAI-1-dependent manner. We proffer a novel mechanism in which PAI-1 inhibits activation of its downstream target STAT3, and furthermore suggest a greater role for intracellular PAI-1 localization than has been previously assumed. Future studies will elucidate the PAI-1/STAT3 axis and determine HDACi translational applicability through in vivo murine models.

Conclusions: These results demonstrate the potential of HDACi as novel therapeutic agents for amelioration of squamous cell carcinoma (SCC) and hyper-healed cutaneous wounds (HHCWs). Utilization of HDACi for resolution of SCC and HHCWs could shift treatment options towards more feasible and efficacious therapies than those currently recommended; indeed, topical application of HDACi could attenuate, and possibly even reverse, skin cell proliferation and lesion growth in both SCC and HHCWs.

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Title: A CROSS-SECTIONAL STUDY OF PATIENTS VISITING FREE CLINICS IN SYRACUSE, NEW YORK INFORMING A HOSPITAL BASED INTERVENTION TO DISTRIBUTE INFORMATION ABOUT FREE CLINICS TO PATIENTS IN NEED

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Purpose:

To better understand and address barriers local patients face accessing healthcare, Upstate Medical and Public Health students are performing a two-part study and outreach program.

Methods:

Part 1 of the study includes a cross-sectional study of individuals who have received care at one of Syracuse's four free clinics. Starting in June 2015, Medical and Public Health students have facilitated surveys to characterize patient demographics, insurance status, preventive care knowledge, and barriers accessing healthcare. Part 2 of the study, starting June 2016, combines a hospital intervention and educational campaign to empower providers to better inform patients about local, affordable primary care.

Results:

As of 2/26/2016 we have administered 182 surveys. The population visiting the free clinics is 53% male with a mean age of 46; 48.4% are white, 32.4% African-American, 4.4% Asian, and 10.4% Latino. 87.4% of patients are uninsured. 41.8% report full-time employment, and 13.77% report part-time employment by; 44% are not employed. When asked why patients weren't able to get insurance, 46.25% patients report it is too expensive. When asked where patients would go for care if there were no free clinics, 33.5% patients responded the emergency room, 15.9% would not seek care, and 13.7% would not know where else to go.

Conclusions:

We anticipate that a more comprehensive understanding of the barriers patients face accessing healthcare and an increased knowledge of resources among providers will contribute to more accessible healthcare within our community.

Medical Student Research

<p>Author: Paridhi Malik Additional Authors: Prateek Mathur, Niket Sonpal Institution: Kingsbrook Jewish Medical Center</p> <p>Title: Inflammatory Bowel Disease and Youtube “ An Alarming Findings</p> <p>The internet has increasingly become an important source of healthcare information. More than 40% of patients say that information found via social media affects the way they deal with their health. 90% of respondents from 18 to 24 years of age said they would trust medical information shared by others on their social media networks. Youtube was chosen as the source of information that was characterized and evaluated based on Global Quality scale. Our aims was to provide clinicians with a snapshot of how reliable information patients obtain on the internet is, so as they can be better prepared to answer questions their patients may have. Youtube has become a popular source on the Internet for providing healthcare information in America, and the increasing popularity makes it essential to characterize the content and quality of information on YouTube. Top 50 videos on Youtube were evaluated based on the global quality scoring system. Scoring was based on the quality and flow of the video along with how adequately the topics were discussed ranging from a score of 1 for poor quality videos with most information missing to a score of 5 for excellent quality videos with very useful information for patients. The results of this study showed that for Ulcerative Colitis (UC) the mean duration, length and views of videos was 656.56 days, 750.52 seconds, 37,285 respectively whereas for Crohns Disease (CD) was 492.82 days, 499 seconds, 51,099 respectively. Total misleading videos for UC was 16 and CD had a total of 10 misleading videos out of the top 50 searches. Mean reliable, mean content and mean global score were found to be 2.32, 2.36 and 2.34 for UC whereas for CD were 3.11, 1.86 and 2.19 respectively. The results indicate that there is a wide range of videos on IBD available on Youtube, most commonly the ones that involve personal experience and patient education. Though many of the videos were helpful, their QCS scores indicate mid-level quality. Many videos did not contain important information and also consisted of elements that were inaccurate. Physicians should counsel and educate patients against inappropriate use of online videos. We plan to expand this study and implement a patient survey to assess the impact and prevalence of Social media drive medicine use by patients at our institution.</p>	<p>Author: Prateek Mathur Additional Authors: Paridhi Malik, Niket Sonpal MD, Jasmine Sawhne MD Institution: Kingsbrook Jewish Medical Center</p> <p>Title: Youtube: A Questionable Source of Information for Mood Disorders</p> <p>The internet has increasingly become an important source of healthcare information, with 60-80% of Americans having used the internet to find health information. However, given the limited evaluation of the quality of the consumer generation information, there is risk of spreading misleading information. This study was performed to identify the quality of information social media provides on psychiatric disorders such as depression and anxiety. Youtube was chosen as the source of information that was characterized and evaluated based on Global Quality Scale. Our aim was to provide clinicians with a snapshot of how reliable information patients obtain on the Internet is, to better equip them to answer questions their patients may have.</p> <p>The first 50 Youtube videos were chosen to provide the data for this study and every video was assigned reliability, content and a global quality score by two different analyzers in the study. The videos were chosen based on the keyword search output, without filters, as it would be by a patient. The keywords were “Depression and Anxiety.” Scoring ranged from 1, which indicates a poor quality video with missing important information, to a 5, which indicates an excellent quality video covering very useful information. Videos were considered misleading if the information provided by the video contained content not related to the subject in study. Data analysis was completed using SPSS.</p> <p>The results of this study showed that for anxiety disorder the mean duration, length and views of videos was 475.68 days on the website, 33 minutes, and had 57,222 views. While for depression, the mean duration was 675.5 days, mean length of 8.3 minutes, and 786,407 views respectively. There were a total of 10 misleading videos for anxiety and a total of 5 misleading videos for depression, both categories out of the top 50 searches. Mean reliable, mean content and mean GQS were found to be 2.62, 2.12, 2.32 for anxiety, and 2.78, 2.75 and 2.78 for depression, respectively.</p> <p>These results indicate that there is a wide range of videos on Youtube, pertaining to anxiety and depression, most commonly ones that involve personal experience and patient education. Though many of the videos were helpful, their QCS scores indicate mid-level quality. Many videos did not contain important information and also consisted of elements that were inaccurate. Based on this study, health professionals and clinicians should be vigilant in recognizing videos and information that could contain misleading information. Physicians should counsel and educate patients against inappropriate use of online videos, while they themselves should become familiar with the mediocre body of evidence. We plan to expand this study and implement a patient survey to assess the impact and prevalence of social media driven medicine by patients at our institution.</p>
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Medical Student Research

<p>Author: Peter Patalano Additional Authors: Samara Levine B.A., Katie Stiene B.A., Jeffrey Birnbaum M.D. Institution: SUNY Downstate College of Medicine</p> <p>Title: HIV/HCV COUNSELING AND THE MEDICAL INTERVIEW: A PROSPECTIVE STUDY ASSESSING MEDICAL STUDENT COMFORT AND CONFIDENCE IN SENSITIVE HISTORY TAKING AFTER TRAINING AND COUNSELING EXPERIENCE</p> <p>Purpose: Communication skills are fundamental to establishing a strong patient doctor relationship, especially in the collection of sensitive patient history, including sexual activity. In light of this, medical school curricula attempt to address this critical clinical skill, however many students feel unprepared when eliciting social and sexual histories. Through the RISE program at the Brooklyn Free Clinic students are trained to provide patients with comprehensive counseling and HIV/HCV testing. The purpose of this research is to assess the effectiveness of RISE training and HIV/HCV counseling in preparing students to confidently elicit social and sexual histories.</p> <p>Methods: To estimate the effect of training and counseling, RISE participants were matched to controls and surveyed after training and upon the completion of 3 counseling sessions. Questions were used to assess participants comfort and confidence in taking social and sexual histories. Surveys were conducted anonymously and used a 5 point Likert scale for assessment.</p> <p>Results: Likert Scale data was converted to 5-point nominal data for comparison. Once converted to nominal data, the mean survey score of the two groups were compared and an independent sample t-test for testing statistical significance was applied. When comparing overall mean scores, counselors had an increased comfort level across all but one parameter. Overall mean for comfort/confidence score for counselors (3.85) varied from the control group (3.40) by +0.45 (p = 0.000322). Compared to their matched controls, counselors got significantly more comfortable and confident in assessing histories over time, whereas no significant difference was observed among controls over time (initial = 3.23, final = 3.36, p = 0.13), there was a significant increase in mean score among counselors (initial = 3.51, mean = 4.21, p = 1.69E-06).</p> <p>Conclusions: Implementing structured training and clinical practice of social and sexual history taking for students improved overall comfort and confidence and increased comfort and confidence over time as compared to students who do not participate in such activities. Although medical school curricula attempt to address and familiarize students with sexual and social history taking, such measures may be augmented through the implementation of structured programs outside of the classroom.</p>	<p>Author: Boris Ryabtsev Additional Authors: Alex Helkin, MD, Kristopher Maier, PhD, Vivian Gahtan, MD Institution: SUNY Upstate University Hospital</p> <p>Title: Long-term fluvastatin administration downregulates pro-stenotic HAS2 and THBS-1 genes in vascular smooth muscle cells</p> <p>Purpose: Intimal hyperplasia has long been a complication of vascular surgery and endovascular interventions. Thrombospondin-1 (TSP-1) is an adhesive glycoprotein that has been implicated in vascular smooth muscle cell (VSMC) migration and intimal hyperplasia. Statins have previously been shown to protect the vasculature and reduce post-surgical, TSP-1-mediated intimal thickening. We studied the effects of fluvastatin on expression of three genes in VSMCs that have been hypothesized to be overexpressed in intimal hyperplasia: HAS2, TGF-β2 and THBS1.</p> <p>Methods: VSMCs were incubated with basal media or fluvastatin (1 μM, 20 min or 20 hrs). Cells were then incubated with TSP-1 (20 μg/ml, positive control) or basal medium (negative control) for six hours. Expression of HAS2, TGF-β2 and THBS1 genes was measured in each of these six groups using quantitative real-time polymerase chain reaction (qRT-PCR). Statistical comparison of gene expression between groups was performed by t-tests, with p<0.05 being significant.</p> <p>Results: HAS2 expression was significantly lower in VSMCs treated with fluvastatin and TSP-1 for 20 hours (0.18 \pm 0.02) compared with TSP-only VSMCs (1.43 \pm 0.27). Similarly, THBS1 expression was significantly lower in VSMCs treated with fluvastatin and TSP-1 for 20 hours (1.37 \pm 0.30) compared with the positive control (VSMCs exposed to TSP-1 alone; 1.69 \pm 0.23). No significant changes in TGFB2 expression were observed.</p> <p>Conclusions: Long-term fluvastatin administration was shown to reduce expression of HAS2 and THBS-1 genes in VSMCs. These findings suggest that one of the protective cardiovascular pleiotropic effects of statins may be the suppression of pro-stenotic genes in VSMCs.</p>
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**New York Chapter ACP
Annual Scientific Meeting**

**Resident/Fellow
Clinical Vignette**

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**Title: SEVER HYPERTRIGLYCERIDEMIA AND ACUTE ABDOMEN:
TAMOXIFEN INDUCED**

Introduction:

Tamoxifen, a non-steroidal anti-estrogenic medication, is widely used as hormonal treatment in breast cancer. The efficacy of this medication in reducing LDL and lipoprotein levels has been documented in the literatures.

Hypercholesterolemia has been reported in about 4% of Tamoxifen users. Tamoxifen-induced hypertriglyceridemia have been linked with life-threatening complications. Herein we describe a patient with Tamoxifen-induced hypertriglyceridemia who presented with acute abdomen.

Case Report:

A 50-year-old Hispanic female with medical history of HTN, DM, hyperlipidemia controlled by Icosapent, and bilateral breast DCIS s/p lumpectomy, presented to the ED on account of excruciating epigastric pain. Pain was 10/10, burning in nature and radiated to the back. Positive history of 10lbs weight loss over two months, nausea and vomiting was appreciated. Patient had been taking 10mg of Tamoxifen daily, two months prior to presentation. She denied any illicit drug use, alcohol abuse or cigarette smoking

On examination: She was in pain. Temp was 37 C, BP: 169/87 and HR: 95. There was excruciating pain on palpation of the epigastric area. Patient-s triglyceride and cholesterol levels were > 10,000 and >1000 mg/dl respectively. Amylase level was 34 mg/dl and Lipase 23 mg/dl. Abdominal Ultrasound and CT abdomen was unremarkable. Tamoxifen was discontinued .The patient was treated symptomatically with pain medications, lipid lowering agents and intravenous fluids. Treatment was well tolerated and after four days of intense management, she was discharged home. A Follow up call to patient-s house two months later revealed no further abdominal pain, she was placed on Exemestane (an aromatase inhibitor) for the breast cancer. TG and cholesterol level was 235 mg/ dl and 100 mg/dl respectively.

Discussion:

Our patient developed extremely elevated triglycerides with epigastric pain after two months of Tamoxifen use. Just like any estrogen, Tamoxifen stimulates the liver to produce VLDL and eventually triglycerides formation. In addition, Tamoxifen also reduces lipoprotein and hepatic lipase activities thereby inhibiting VLDL and IDL catabolism. Patients with familiar triglycerides-lipoprotein metabolism disturbance could be more susceptible to this hypertriglyceridemia.

Many instances of delayed hypertriglyceridemia have been cited in literatures. Just like our patient that presented two months after starting Tamoxifen. The reported finding of normal Amylase and Lipase despite suggestive clinical picture of pancreatitis could be related to chronic pancreatitis. The fact that our patient-s lipid panel was normal prior to Tamoxifen use further suggested Tamoxifen as the culprit. Hence, we recommend checking lipid profile before and after starting a patient on Tamoxifen. Fenofibrates have been used to treat these patients with elevated triglycerides.

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**Title: INFLUENZA A ASSOCIATED ARDS IN PREGNANCY: CRITICAL
DECISION MAKING SAVES LIVES.**

Introduction: Pregnancy is a risk for morbidity and mortality from Influenza. Immunological and circulatory changes in pregnancy increase risk for adverse outcomes with influenza, including acute respiratory distress syndrome (ARDS). Presented is a case of Influenza A in the third trimester managed successfully with Oseltamivir and mechanical ventilation.

Case: 18-year-old pregnant woman hospitalized at 38 weeks gestation with fever, chills, cough and dyspnea of two days duration. She had tachycardia, tachypnea, and bronchial breath sounds over the right side. Nasopharyngeal swab with polymerase chain reaction (PCR) was positive for influenza A. She received influenza vaccination during the second trimester. Oseltamivir was initiated on admission to critical care unit. X-ray: consolidation on right lower lobe, patchy opacities on left. ABG: arterial oxygen tension to fraction of inspired oxygen ratio (PaO₂/FiO₂) of 134mmHg. A diagnosis of ARDS precipitated by Influenza A pneumonia was established. The patient was placed on high flow nasal oxygen at 40 Litre/minute, with broad spectrum antibiotics. Due to progressively worsening hypoxia on 100% FiO₂, decisions of elective endotracheal intubation and mechanical ventilation were made. She ultimately delivered a healthy baby girl by caesarean section, and was successfully weaned off the ventilator on day 5.

Discussion: ARDS is defined as a lung disease with acute onset, bilateral infiltrates on chest x-ray, absence of intra-vascular volume overload or pulmonary artery wedge pressure less than 18 mmHg, and markedly impaired oxygenation, with PaO₂/FiO₂ < 200 mmHg. Acute ARDS occurs more frequently in critically ill, pregnant patient than the general population¹. Causes of respiratory failure in pregnancy include exacerbation of asthma, pneumonia, pulmonary embolism, amniotic fluid syndrome, and pneumothorax. The risk of viral infections increases with alteration of cellular immunity during pregnancy. Influenza infection in pregnancy is associated with a risk of fetal death. Pregnant patients with suspected influenza benefit from early empiric antiviral therapy regardless of vaccination status. Endotracheal intubation and mechanical ventilation help treat severe hypoxaemia in ARDS as the fetus needs maternal PaO₂ >70mmHg for oxygenation. Low tidal volume based on predicted body weight in those with ARDS is recommended.²

Conclusions:

1. Early Oseltamivir therapy helps manage Influenza A pneumonia and resulting ARDS during pregnancy.
2. As hypoxia increases risk of fetal distress, intubation and mechanical ventilation with timely caesarean section may be essential in pregnancy associated ARDS.

References:

1. ARDS in Pregnancy and the Puerperium: Causes, Courses and Outcomes. *Obstet Gynec.*;2001;97;760-4
2. Low-Tidal-Volume Ventilation in ARDS. *NEJM.* 2007;357:1113-112

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