



Puerto Rico
Chapter

2021 CLINICAL VIGNETTES & RESEARCH ABSTRACTS

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ORAL PRESENTATIONS ABSTRACTS

Oral Presentations Abstract #1

Abstract Title: Clinical Hypothyroidism masked biochemically due to Biotin supplements???

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Abstract

Biotin (Vitamin B7) is widely available as an over the counter supplement for skin, hair and nail health. Many immunoassays use the biotin-streptavidin interaction as an immobilizing system, in which biotin can be readily incorporated into a hormone. Ingestion of high doses of biotin has been reported to cause abnormal results in thyroid function tests by this assay interference. Hereby we describe the case of a patient with clinical hypothyroidism but biochemically hyperthyroid due to biotin supplementation.

A 60-year-old female patient with past medical history of bronchial asthma was referred for further evaluation after been found with multiple bilateral thyroid nodules of low suspicion on Thyroid Ultrasound (US) by her primary care physician. Five months prior, patient had been complaining of fatigue, cold intolerance, dry skin, and muscle weakness. On initial evaluation, patient reports that her symptoms have persisted but she denies having neck pain, cough, hoarseness, odynophagia, family history of thyroid cancer or head and neck radiation exposure. Physical examination did not reveal goiter and thyroid nodules were not palpable, strength grossly intact and deep tendon reflexes slightly decreased on upper and lower extremities. Laboratory results: TSH: 0.024 mU/ml, FT4: 1.10 ng/dl and thyroglobulin antibody: 1.52IU/L. Clinical hypothyroidism was being masked by biochemical hyperthyroidism. Further questioning revealed patient had been self-medicating with OTC biotin supplements for months prior to visit. Biotin interference was suspected and patient was advised to hold biotin to have tests repeated. Indeed, results showed TSH of 18.5 mU/ml and Free T4: 0.83 ng/dl, consistent with her hypothyroid state. Patient was oriented and started on thyroid hormone replacement therapy with Synthroid.

As the use of supraphysiological doses of biotin increases, assay interference will be regularly encountered due to the widespread use of immunoassays. Despite progress in immunoassays technologies, the problem of unwanted interference has not yet been overcome. A thorough analysis of the clinical picture and hormone results, along with an open communication with patients and other clinicians, remains the best strategy to avoid clinical mismanagement due to unsuspected interference.

Oral Presentations Abstract #2

Abstract Title: Haemophagocytic syndrome as a presentation of severe COVID-19 infection

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Abstract

Haemophagocytic syndrome also known as Haemophagocytic lymphohistiocytosis (HLH), is a rare systemic hyperinflammatory disorder that can be triggered by infections (most commonly viral), malignancies, or rheumatological diseases. The pathophysiology of HLH results from excessive and persistent activation of macrophages and T cells, and impaired cytotoxic function by NK (natural killer) cells and CD8+ T cells. This uncontrolled immune response leads to hypersecretion of several cytokines, which is commonly referred to as Cytokine Storm. The frequency of HLH in severe corona virus (COVID-19) is lower than 5%; with an associated mortality rate of 54%. HLH often present as an acute and rapidly progressive disorder which can mimics common diagnoses like sepsis. Clinical manifestations include unremitting fever, lymphadenopathy, hepatosplenomegaly, cytopenias, hyperferritinaemia, hypertriglyceridaemia, and haemophagocytosis (on liver, spleen or lymph node biopsy). HLH diagnosis is made based on both clinical and laboratory findings. The H-score system facilitates the assessment of patient's risk for secondary HLH. The probability of having HLH is >99% with an HScore of >250.

A 59-year-old Puerto Rican man with unremarkable medical history, was brought to the emergency room because a 4-day history of high fever, severe weakness, and somnolence. Four months prior his presentation, was diagnosed with COVID-19 infection few days after receiving the first dose of COVID-19 vaccine. He developed self-resolving mild COVID-19 pneumonia; and afterward continued with unexplained fatigue, decreased appetite and weight loss. Physical exam on hospital admission was remarkable for an acutely ill patient; icteric sclerae, hepatosplenomegaly, and diffuse lymphadenopathy. Laboratories revealed anemia, thrombocytopenia, hypertriglyceridaemia, hyperferritinaemia (10,505 ng/dL), mildly elevated aspartate aminotransferase, and positive COVID-19 PCR. Multiple cultures of blood, urine, sputum, and stools were negative. Imaging studies revealed significant lymphadenopathy (on the chest, abdomen and pelvis), and hepatosplenomegaly. Lymph nodes and bone marrow biopsies revealed histiocyte predominance and atypical lymphohistiocytic infiltrates, respectively. The patient was initially diagnosed with sepsis, and treated with intravenous broad spectrum antibiotics. Hospital course was remarkable for persistent fever, and progressive cytopenias. He was diagnosed with Haemophagocytic syndrome (HScore of 228; 96% chance of HLH), and was treated with dexamethasone and intravenous immunoglobulin. Tocilizumab was contraindicated due to severe thrombocytopenia, and gastrointestinal bleeding. The patient required mechanical ventilation and management at intensive care unit; he died despite maximum support.

We reported a case of HLH triggered by COVID-19. Clinicians should consider haemophagocytic syndrome in severe COVID-19 infection; especially in patients with clinical deterioration, and signs of persistent fever, extremely high ferritin levels, cytopenias, hypertriglyceridemia, lymphadenopathy and organomegaly. Timely diagnosis of HLH can be challenging; requires initial exclusion of common diseases; and identification of possible triggers to initiate the treatment. Current management of virus-triggered HLH consists of high-dose steroids, biologic agents, and intravenous immunoglobulins.

Oral Presentations Abstract #3

Abstract Title: Not All That Itches is Dermatitis, Uncovering a Cutaneous Malignancy

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Abstract

Primary Cutaneous Anaplastic Large Cell Lymphoma (PC-ALCL) is a rare subtype of CD30 + lymphoproliferative disorders that affect the skin with no evidence of extracutaneous involvement upon diagnosis. Presents as a red-violaceous rash with scaly lesions and itching, often confused for dermatitis that fails to respond to conventional therapy. With an incidence of less than 0.25 cases per 100,000 people, is rarely encountered in clinical practice, thus is frequently misdiagnosed leading to symptom and possible malignancy progression due to delay in treatment. Hence, we present this case of an PC-ALCL misdiagnosed as dermatitis.

Case of a 66 year-old hispanic male with past medical history of dilated cardiomyopathy s/p defibrillator, schizoid personality, who was referred to Dermatology service due to new onset, violaceous plaque-like lesions with constant itching. Physical examination revealed excoriated plaque-like lesions at the scalp, bilateral arms, and lower back with erythematous borders. The patient was prescribed Mupirocin ointment and Betamethasone dipropionate, however symptoms progressed with severe itching and self-inflicted scratching. Differential diagnoses included seborrheic dermatitis, and ichthyosis vulgaris for which was provided a short course of oral corticosteroids, antihistaminic, topical anesthetics, topical corticosteroids, moisturizing ointments, sulfur and urea creams for symptomatic relief. Symptoms resolved for a period of two years, however lesions continue progressing, increasing in size with ulceration and crusting observed, as well as appearing in the facial area. Punch biopsy was performed revealing a dense superficial to mid-dermal lympho-histiocytic infiltrate extending into the deeper dermis. Lymphocytes were predominantly T cells with CD4 cells outnumbering CD8 with a majority positive for CD30, and ALK-1 negative which along with clinical findings support diagnosis of PC-ALCL. PET CT revealed several small foci of slight to mild tracer uptake throughout the skin with an SUV range from 1.4 to 3.2 larger uptake located on the middle aspect of the back. Bone marrow biopsy was performed with the impression of normocellular marrow with trilineage hematopoiesis with no evidence of lymphoma in the aspirate. Patient was started in an anti-CD30 monoclonal antibody, Brentuximab after confirming no organ involvement with a PET/CT scan.

Despite excellent prognosis with less than 10% of cases progressing to systemic subtype, misdiagnosis leads to unresponsive symptoms that may cause severe discomfort and distress to patients, as well as possible malignancy progression. This case raises awareness of the possibility that unresolving skin lesions may be due to an underlying malignancy, thus an aggressive diagnostic approach should be performed to avoid unintended outcomes.

Oral Presentations Abstract #4

Abstract Title: Ramsay Hunt Syndrome: Rare Complication of Shingles

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Abstract

Varicella-Zoster virus (VZV) infection is characterized by two distinctive phases, described as the primary infection which is commonly known as chickenpox, and the latent phase which results from a reactivation of the virus. After being exposed to chickenpox, varicella-zoster virus remains in the sensory ganglion of spinal and cranial nerves, and during reactivation herpetic inflammatory lesions can develop from the ganglion to associated dermatomes. Herpes Zoster most frequently involves the thoracic region (59.2% of cases), but it also involves the head and neck region (35% of cases). In some rare cases, this reaction reaches the geniculate ganglion causing herpes zoster oticus and ipsilateral peripheral facial paralysis. Herpes zoster oticus associated with a peripheral facial nerve paresis with further neurological disturbances is known as Ramsay Hunt Syndrome (RHS); first described by neurologist James Ramsay Hunt in 1907.

We present the case of a 41-year-old woman with a past medical history of bronchial asthma and obesity who presented to the emergency room with complaints of a painful rash on her face of days of evolution. Review of systems included right hearing loss, otorrhea, subjective fever, headache, and ipsilateral facial paresis. Denied blurry vision, eye pain, loss of sensation, or seizures. Outpatient medications included cetirizine. Vital signs were unremarkable. Physical examination revealed notable right inner cheek erythematous vesicles with purulent secretions, right ear auditory canal with painful erythematous vesicles with associated purulent secretions. Laboratories showed leukocytosis with lymphopenia, monocytosis, slight toxic granulation, normochromic normocytic anemia, elevated CRP 2.1 mg/dL, and elevated erythrocyte sedimentation rate of 57 mm/hr. Covid-19 rapid test was negative for IgM/IgG. The patient was treated with a parenteral dose of acyclovir at 15mg/kg per day divided into 3 doses, steroids and gabapentin for herpetic neuralgia. The patient was consulted to ENT and recommended to continue acyclovir and to add otic suspension of ciprofloxacin/dexamethasone therapy.

This case is intended to educate physicians on infectious causes of facial paralysis. Early diagnosis of RHS is important, as this condition is more severe than Bell's palsy and may cause serious complications such as neural denervation and decreased probability of full recovery. There are several symptoms noted in patients with RHS, which include: rash or blisters at the ear, scalp, or mouth, weakness/paralysis of the face, altered taste, loss of facial expression, head or ear pain, dizziness, vertigo, or nausea. Not all symptoms are needed for diagnosis, since it is mainly based on medical history, clinical findings, and neurological examinations with confirmation by PCR testing. Recognizing RHS has gained importance due to the wide associated practice of treating these patients with antiviral agents with corticosteroids even though consensus data for treatment is missing

Oral Presentations Abstract # 5

Abstract Title: Catastrophic Bilateral Ischemic Stroke in COVID-19 induced Thrombotic Microangiopathy

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Abstract:

Thrombotic thrombocytopenic purpura (TTP) is an uncommon disease characterized by the presence of platelet-rich multimers that obstruct microcirculation leading to thrombocytopenia, microangiopathic hemolytic anemia (MAHA), microvascular thrombosis and ischemic organ injury. Viruses are known trigger factors in the pathogenesis of thrombotic microangiopathies, however limited literature exists about COVID 19-associated TTP. The brain is the commonest organ involved, and patients usually present with fluctuating neurological symptoms that can be attributed to ischemia of the cerebral cortex and/or subcortical white matter caused by transient small vessels occlusions or microinfarcts. Nevertheless, large cerebral artery occlusions (LCAO) resulting in strokes are a rare phenomenon, with only 10 cases reported in literature. To our knowledge this is the only described case of COVID-19 triggered TTP with bilateral LCAO involvement.

A 56 year-old female patient with past medical history remarkable for TTP presents to the urgency room (UR) with a 1-week history of a headache associated to nausea, vomiting, watery diarrhea, scattered ecchymosis and right upper extremity weakness. During that period she had gone to another institution where laboratories and head CT scan (HCT) were unremarkable and the patient was discharged home. Upon physical examination, prominent right upper extremity weakness, as well as slurred and incoherent speech were identified. While in the UR, she developed rapid neurocognitive decline requiring endotracheal intubation. HCT demonstrated massive left MCA and right PCA acute ischemic infarcts. Complete blood count showed anemia of 6.3g/dL and thrombocytopenia of 20.0 x10³/uL. Schistocytes and helmet cells were identified on peripheral smear. Increase lactate dehydrogenase at 1372 IU/L as well as indirect hyperbilirubinemia were present as well. She had a preserved renal function and no major electrolyte disturbances. Chest x-ray revealed bilateral peripheral patchy infiltrates and the patient was found COVID-19 positive. Infusion of fresh frozen plasma was provided for 5 days, followed by daily plasma exchange (PEX) and high dose steroids along with Remdesivir. After 25 days of PEX and two doses of Rituximab, patient platelet count stabilized and was discharged home to continue physical rehabilitation. Extensive workup ruled out any embolic source or concomitant etiologies of stroke as well as no other triggers for TTP relapse were identified.

This case demonstrates an unusual manifestation of simultaneous bilateral large vessel ischemic strokes in the context of TTP. Moreover, albeit infections are a known trigger for this condition, COVID-19 infection as an etiology for TTP relapse has yet to be described. Although infrequent, it is important to recognize the extent of neurovascular complications in TTP so that prompt and appropriate interventions can be undertaken. As this pandemic continues we must raise awareness of the possible implications this virus might have in patients with long standing conditions or comorbidities.

Oral Presentations Abstract #6

Abstract Title: Neuro-Behcet's: An Unforeseen Disease Commonly Mistaken

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Abstract

Neuro-Behcet's disease is the primary neurological involvement of Behcet's disease, a chronic vascular-inflammatory disease of unknown origin that affects multiple systems and typically presents with recurrent oro-genital ulcers and uveitis. It is a rare condition seen in approximately 5-10% of all cases of Behcet's, with an age of onset usually between the third-and-fourth decade of life and a male-to-female ratio of more than three-to-one. Diagnosis is mainly clinical; however, CSF studies and neuroimaging are necessary to exclude other etiologies.

This is a case of a 24-year-old male with no known medical history that arrives at ED after presenting a two-month history of intermittent episodes of disorientation and agitation. Six months before admission, he complained of constant occipital headaches, photophobia, diplopia, night sweats, fever (39-40C), and arthralgias. The patient was hospitalized on 2 different occasions and treated with broad-spectrum antibiotics and antivirals without resolution of symptoms. Upon further investigation, his wife referred that the patient had presented recurrent scrotal ulcers that resolved on their own. On examination, the patient was hemodynamically stable but febrile (40C), somnolent, with oral aphthous ulcers, truncal/facial papulopustular lesions, and no signs of meningeal irritation. Laboratories remarkable for neutrophilic leukocytosis and elevated inflammatory markers. Complete viral panel (HIV, Hepatitis, HSV, RPR), Cryptococcal & Histoplasma antigen, and Toxoplasma were negative. Brain MRI showed bilateral symmetric regions of T2, FLAIR hyperintensity involving the bilateral basal ganglia, thalami, hypothalami, cerebral peduncles, and midbrain with associated mild obstructive hydrocephalus and minimal left to right midline shift of 2 mm. Due to these findings, lumbar puncture was delayed by Neurology but performed days after with CSF showing mild pleocytosis of lymphocytic predominance, elevated proteins, normal glucose levels, no organisms on Gram stain, no growth in cultures, and cryptococcal antigen, meningoencephalitis panel, VDRL, and HSV 1&2 PCR with negative results. Rheumatologic workup, PPD, and IGRA were also negative. Ophthalmology performed a fundoscopy which revealed anterior uveitis of the left eye. Pathergy test was negative. He was treated with broad-spectrum antibiotics and Acyclovir; however, infectious etiologies were ruled out due to timing of symptoms, clinical presentation, and CSF & serum studies, therefore antibiotics were discontinued. Intravenous steroid pulsation was given with almost complete resolution of symptoms. He was discharged on oral steroids with a follow-up appointment at Rheumatology clinics for possible Azathioprine use.

This case describes an unusual presentation of Neuro-Behcet's disease which could commonly be mistaken with encephalitis/meningoencephalitis of infectious etiology and delay appropriate therapy. Adnan et al report a mean of 20-30% of patients with residual neurological impairments and a high 10-year mortality of 10%. Therefore, a thorough history/physical exam is crucial to narrow our diagnostic workup within the shortest time and reduce morbidity/mortality rates by providing early therapeutic intervention.

Oral Presentations Abstract# 7

Abstract Title: Rapidly Progressing Case of Calciphylaxis in ESRD

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Abstract

Rapidly progressing case of calciphylaxis in ESRD

End-stage renal disease (ESRD) patients have multiple risk factors in developing complications or rapid progression of comorbidities. One of the many conditions is calcific uremic arteriopathy. It is characterized by skin ischemia and necrosis, causing calcification fibrosis of arterioles and capillaries in the dermis and subcutaneous adipose tissue. Patients with this condition are at risk of infection and skin ulceration, with a high risk of morbidity and mortality, especially if a female with a history of cardiovascular disease, longer dialysis vintage, warfarin use, and diabetes.

This is a case of a 61-years-old female patient with a past medical history of duodenal ulcer, lower gastrointestinal bleeding requiring blood transfusions, hypertension, insulin-dependent diabetes mellitus, and ESRD on hemodialysis. The patient presented to the emergency department due to melena of one day of evolution and was admitted to our services with the diagnose of symptomatic anemia. The patient was recently discharged home after being hospitalized due to the same complaints with findings of active duodenal ulcer bleeding requiring more than nine red blood cell transfusions. Signs and symptoms were associated with fatigue and developing skin lesions with black eschar and erythema in the medial thighs, posterior calf, and heels. These lesions then rapidly progress in 14 days to excruciatingly painful ischemic necrosis wounds. Calciphylaxis was suspected due to painful subcutaneous nodules, nonhealing ulcers, and cutaneous necrosis, mainly as the patient anatomically presented . The main treatment components were local wound care, pain management, and IV antibiotic treatment for infected wounds. In routine laboratories related to calciphylaxis, there were increased levels of phosphorus. A skin biopsy to confirm the diagnosis was made with necrotic findings. A syndrome characterized by rapidly progressive ischemic necrosis involving large areas of the skin and muscle and by peripheral gangrene associated with extensive vascular calcifications was observed in this patient.

Calciphylaxis may be misdiagnosed, particularly in the early stages when typical clinical features are absent, as in this patient. The disease progression, in this case, was faster than expected, and this case illustrates the importance of identifying and diagnosing such unusual cutaneous manifestation at early stages to prevent further complications for the patient. Early diagnosis and a multi-disciplinary approach are critical components of managing this complex disease. Calciphylaxis has no approved therapies, and there are limited treatment modalities for calciphylaxis. Increased awareness and research in this field have facilitated the identification of risk factors and causation pathways. The development of therapeutic options and wound care management, however, is still at a nascent stage, and certain therapies have shown a promise that needs evaluation in prospective clinical trials.

Oral Presentations Abstract #8

Abstract Title: Rare Manifestation of Cutaneous Opportunistic Infection in Immunocompromised Patient

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Abstract

Introduction:

Secondary Syphilis is a well-known sexually transmitted disease caused by *Treponema Pallidum* characterized by episodes of active clinical disease interrupted by periods of latent infection. Since 2018 there has been an increase in cases of syphilis; literature data suggest that approximately 42% of patients with primary and secondary syphilis are Human Immunodeficiency Virus (HIV) infected. Approximately, 29% of patients have atypical cutaneous manifestations that may include diverse phenotypic presentations such as papular, nodular, pustular, ulcerative, granulomatous, among others. Nonetheless, rupioid syphilis is a rare form of presentation of secondary syphilis associated with rapid progression and occasionally associated with hepatitis.

Case Description:

This is the case of a 32-year-old male patient with medical history of non-treated HIV diagnosed ten years ago. He presented to our institution with a one-month history of general malaise, subjective fever, weight loss, dry cough, and disseminated hyperkeratotic pruritic skin lesions including papules, crusted plaques, nodular ulcerative lesions, and some with erosive changes involving the upper and lower extremities, face, genital mucosa, and entire trunk. The patient denied any prior episodes. Initial laboratory workup pertinent for a CD4 count of 30 and viral load above 200,000. The comprehensive metabolic panel was remarkable for elevated alkaline phosphatase, mild transaminitis, elevated ESR and CRP. Initial differential diagnosis included disseminated fungal infection, Kaposi sarcoma, and atypical mycobacterial infection. Further workup revealed reactive VDRL (1:32) and positive fluorescent treponemal antibody (FTA-ABS) assay. Therefore, patient was started on Penicillin G benzathine 2.4 million weekly for 3 weeks. Multiple Skin biopsies were performed with histopathology was consistent with atypical features of secondary syphilis including suppurative granulomatous dermatitis with plasma cells and dense lichenoid lymphoplasmacytic infiltrate with neutrophils. Negative Periodic Acid-Schiff and Acid Fast stain. Furthermore, the patient was started on antiretroviral therapy and antibiotic prophylaxis for opportunistic infections in acquired immunodeficiency syndrome (AIDS). After one week of treatment, the VDRL titters decreased substantially, and the cutaneous lesions showed marked improvement. Moreover, after 3 weeks, cutaneous lesions were almost healed. The patient was referred to an HIV center to continue antiretroviral therapy and discharged home. Six months follow-up revealed improvement in symptoms, healed cutaneous lesions, and improved CD4 count.

Discussion:

Literature has shown the important clinical correlation between syphilis and HIV since it is associated with a higher transmission and acquisition of HIV given syphilitic ulcers facilitate the transmission of the virus. In addition, syphilis stimulates the immune system leading to an increase in HIV replication and lower CD4 counts. Secondary Syphilis has considerable histopathologic variability due to the multiple presentations and evolution of lesions over time. This case highlights a rare presentation of rupioid syphilis in an immunocompromised patient with HIV and the importance of awareness of the variable presentations of syphilis.

Oral Presentations Abstract #9

Abstract Title: The Hidden Suspect: Acute Aortitis as a Cause of Methicillin-Resistant Staphylococcus aureus (MRSA) Bacteremia

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Abstract

Aortitis is a well-known complication of the large vessel vasculitides and other rheumatologic conditions; however, the inflammation of the aortic wall may raise as sequelae of blood-stream bacterial infection. Aortic wall injury caused by atherosclerotic disease or aneurysmal dilation may create the perfect environment for bacterial seeding.

Herein we report the case of a 95-year-old male with medical history of Diabetes Mellitus type II, Arterial Hypertension, Hyperlipidemia, Coronary Artery Disease, Complete Atrioventricular Block s/p pacemaker implantation, and Chronic Kidney Disease (CKD) stage III who returns to the hospital two weeks after completing 28 days of Vancomycin for MRSA bacteremia of unknown etiology. Patient was brought back to the Emergency Department for evaluation after two days of intermittent fevers, along with hypoactivity and multiple episodes of non-bloody emesis. Vital signs were significant for fever (102.8 F). Physical exam was negative for skin findings, abdominal tenderness, or signs of vascular involvement. Broad-spectrum antibiotic therapy was initiated with Vancomycin and Piperacillin/Tazobactam, and he was subsequently admitted to Internal Medicine Ward for further care. Initial laboratories were significant for leukocytosis (WBC: $14.7 \times 10^3/\mu\text{L}$) with neutrophilic predominance (Segs: 85.8 %), stable normocytic-normochromic anemia, and platelet count. Urinalysis with few bacteria, hematuria, and pyuria. Chemistry with renal parameters consisting with underlying CKD, no major electrolyte disturbances, and normal liver function. Lactatemia of 2.8 mmol/L, and procalcitonin found at 0.51 ng/mL. Inflammatory markers consistent with an ESR of 57 mm/hr and a CRP-HS of 127.4 mg/L, both in increasing trend as when compared with values from prior hospitalization. MRSA DNA nasal swab was found positive as on previous admission. Chest X ray revealed bilateral perihilar bronchopneumonia. Blood cultures isolated gram-positive cocci in clusters by the third day, and final reports were consistent with the recurrence of MRSA strain. Transthoracic echocardiogram showed no vegetations. In the context of no clear source of infection, a Gallium scan was ordered, and results were compatible with a prominent gallium avid process at the retroperitoneum involving the right lateral wall of the abdominal aorta below the superior mesenteric artery trunk level, as seen with aortitis. Indium-111 WBC scan from prior admission was found within normal limits. Antibiotic therapy tailored to Daptomycin for six weeks and life-long suppressive therapy was considered, as patient was not a surgical candidate.

It is known that Staphylococcus aureus bacteremia (SAB) is a common serious bacterial infection, with an associated mortality of about 30%. Persistent bacteremia is often seen despite adequate antibiotic therapy in 6%-38% of all SAB infections. These cases should raise concern for the presence of an endovascular infection, and clinician should always beware of the need of prompt aggressive therapy including surgical intervention if warranted and the high mortality associated with this condition.

RESEARCH ABSTRACTS

Research Posters Abstract #1

Abstract Title: Association of Gastrointestinal Symptoms and Hospitalized COVID-19 Infected Patients

Authors: Dannel Diaz Ruiz, MD; Milton Carrero MD FACP; Jeandelize Soto Rosas, MD

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Residency Program: Mayaguez Medical Center

Abstract

Introduction

There is clinical and pathological evidence for COVID-19 involving the gastrointestinal system. Research has shown that angiotensin-converting enzyme 2 (ACE-2) is the receptor critical for cellular entry of SARS-CoV, and articles have shown a 100-fold higher Ace2 in GI system compared to the lungs. Furthermore, ACE-2 most likely has a vital role in the pathogenesis of liver damage in COVID-19. This study proposed determining the most common gastrointestinal symptoms in hospitalized COVID-19 positive patients and the association of disease severity of COVID-19 infection depending on gastrointestinal symptoms.

Methods

Retrospective analysis of collected data from COVID-19 confirmed patients at our institution from January 2020 to April 2021. We collected patient demographics, medical history, laboratory data, and clinical outcomes of a total of 190 patients. The sample included Male and females hospitalized with positive PCR COVID-19 test in an academic tertiary hospital.

Results

Of 190 COVID-19 patients, 76 (40%) presented gastrointestinal symptoms. The most common gastrointestinal symptoms presented were nausea/vomiting in 40 patients (21.1%) and diarrhea 39 (20.5%). There was no association between bilirubinemia and disease severity ($p=0.0726$) and no association between GI symptoms and disease severity ($p=1.0$). Furthermore, 40 patients (21.1%) presented with elevated liver enzymes (defined as alanine aminotransferase level >35 U/L for men and 25 U/L for women at admission). Patient with elevated liver enzymes has the odds 3.68 times higher of having a severe outcome p -value ($p=0.003$).

Discussion

In this study, we demonstrate a quantity of PCR positive covid-19 patients who has concomitant gastrointestinal symptoms. Most common gastrointestinal symptoms presented on covid 19 infections were nausea, vomiting and diarrhea. There was no association with having GI symptoms and Covid 19 severity of the disease in this population. Statistically significant increase of COVID 19 severity in patients presenting elevated aminotransferases.

Research Posters Abstract #2

Abstract Title: Caffeine Consumption by Employees at Mayaguez Medical Center

Authors: Jose Rivera Sepulveda, MD; Jan P. Rosaly, MD; Karla Velez Rivera, MD

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Abstract Text

In 2015 the American Medical Association reported that health care professionals work approximately 40-80 hours a week. Leading to increase caffeine consumption in order to maintain productivity and efficiency. The purpose of the study is to evaluate the amount of caffeine consumption, side effects and/or withdrawal symptoms in healthcare workers of Mayaguez Medical Center, and confirm or exclude that healthcare professionals exceed the amount of healthy caffeine consumption.

Design: Cross-sectional study at Mayaguez Medical Center

Sample size: 128 subjects (Healthcare + non-healthcare professionals of MMC). Information was obtained from a created survey provided to the staff of Mayaguez Medical Center. Each participant was given an authorization letter. Data obtained and tabulated was plotted using Microsoft excel sheet. Tables, graphs and histograms were created to measure frequency and evaluate usage, dependence and withdrawal of caffeine in Mayaguez Medical Center.

Most of our participants were composed of attendings, and residents followed by nursing staff from the Surgery ward. Almost half of the sample required caffeine in order to complete their work as well as to feel more efficient. While 64% possibly consumed caffeine out of pleasure. 88% of our population consumed caffeine in the workplace. The adequate amount of caffeine daily is <400mg and only 35% reported to know the correct safe amount.

Caffeine was consumed daily by almost half of our sample. It was demonstrated that not all of our participants drank caffeine to feel more effective rather than by pleasure. 65% of our population were naive to the correct safe amount of <400mg of caffeine. Hence, this could lead to excess caffeine consumption. It must be addressed that the mg of caffeine will be dependent on the source consumed. In conclusion, the majority of MMC workers consume more than half of the required dose of caffeine during work hours. Suggesting increase in tolerance and abuse of caffeine.

Research Posters Abstract #3

Abstract Title Parasitic Infection in the West side of Puerto Rico

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Abstract Text

On September 20th, 2017, Puerto Rico suffered the impact of Hurricane Maria. It caused a blackout of communication and essential services were affected, including access to drinkable water. In addition, many areas were flooded, and water supplies were contaminated. Two years before the atmospheric phenomenon, there were no cases of stool ova and parasites at Mayaguez Medical Center (MMC). However, 6 months after the Hurricane positive tests began to appear. The purpose of this study is to determine if there is a correlation between positive stool ova and parasite test's in the west side of Puerto Rico with the occurrence of Hurricane Maria.

A retrospective cross-sectional design study analyzed all the stool tests for ova and parasites from January 2015 to December 2020 performed at MMC were quantify. The variables of date, age, sex, municipality, history of asthma, and parasite were collected. Univariate analysis was performed to describe demographical and clinical variables. To define the characteristics of the sample the use distributions charts, central tendency and dispersion measures were used.

From January 2015 to December 2020; 1,370 of stool tests of ova and parasites were performed at MMC. On the years 2015-2017 there were no positive samples. However, during 2018-2020 a total of 19 positive stools test were identified. The median age of the population that presented with positive sample was 41.5 years old. 62% were females and 38% were males. The municipally of Anasco had the highest frequency of positive cases of ova and parasite stool test. Strongyloides was the most prevalent parasite found with a 67%, specifically on the months of July and August. There was no statistical difference between patient with asthma and Strongyloides infection.

There was a marked increase of positive stool test of ova and parasite at MMC during the years 2018-2020. An important risk factor could be the impact of Hurricane Maria. However, a direct correlation between the positive parasite stool test and the Hurricane cannot be established in this study. Collaboration of private laboratories and/or nearest hospital laboratories could increase the power of study and common relationship could be established between the positive cases.

Research Posters Abstract #4

Abstract Title: Clinical Profile of COVID-19 Patients with Fatal Outcome at Mayaguez Medical Center

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Abstract

Background

Coronavirus disease 2019 (COVID19) is a highly contagious strain that spreads through droplets. It has become a global pandemic leading to the death of over 3.4 millions of people. The estimation of outcomes is imprecise because the duration of the disease is variable. There are scarce details on the possible characteristics of the disease which leads to develop potential profiles for high-risk patients. The objective of the study was to observe and describe common characteristics in patients with COVID19 who developed fatal outcomes.

Methods

Cross-sectional study from March 2020-2021 with a sample size of 42 patients. Data was obtained from Mayaguez Medical Center medical records. Patients with PCR COVID19 (+) were identified and each record was reviewed to assess potential variables. Data was plotted using Microsoft Excel sheet. Frequency of variables were calculated. Univariate analysis was performed to describe demographic and clinical variables. Central tendency and dispersion were measured as well. Chi-square statistic and Mann-Whitney U Test were used to assess associations and median differences, respectively.

Results

There was statistically significance between length of stay (before death) and mechanical ventilation (MV) ($p=0.039$). In addition, statistical significance was observed between days started MV and non-invasive mechanical ventilation ($p=0.058$). However, no association between Mycoplasma co-infection and MV ($p=0.215$) was found. No difference observed between vaccine history and days of death after admission ($p= 0.260$). Results suggested that early identification of symptoms don't associate with mechanical ventilation requirement.

Conclusion

Results demonstrated that age can be a determinant factor for patient's outcomes. Another factor observed were patient's comorbidities. Based on results, hypertensive patients are at high risk to develop fatal outcomes. Most of the patients with co-infection with Mycoplasma were intubated more frequently but no correlation was identified. Suggesting that co-infection with Mycoplasma can predispose patients to higher risk for fatal outcomes. In conclusion, identifying patient's characteristics will help to create a clinical profile of high risk patients and potentially improve the outcomes.

Research Posters Abstract #5

Abstract Title: Innovating Our Internal Medicine Residency Program by Incorporating the ACP Point-of-Care Ultrasound Curriculum

Authors: Maria Cochran MD, Ubaldo R. Madera Sanchez MD, Keila Díaz Rodríguez MD, Janice Cuevas Rivera MD, Javier Ortega Belasqui, MD

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Residency Program: Hospital Universitario Dr. Ramón Ruiz Arnau (HURRA)

Abstract

Introduction: Insonation (ultrasound) has become the 5th pillar of physical examination in medicine, that many authors have called the new stethoscope. It is imperative to provide the internal medicine trainees with the tools and skills to deliver better care to the patients, thus proper medical treatment using a non-invasive approach.

Methods: We included the internal medicine residents enrolled from August 2020 to April 2021 at HURRA residency program except for the authors of this research. At the beginning of the study, we distributed a 26-question anonymous electronic pre-test in which we collected data on self-reported attitude toward POCUS use and resident's confidence in recognizing diverse POCUS images. In addition, a timed image interpretation test with a total of 17 POCUS videos was applied and scored. In the second part of the study, we delivered monthly workshops following the American College of Physicians (ACP) POCUS online modules. After completing the ACP POCUS modules, we delivered the 26 questions Post-test and the same 17 POCUS videos interpretation to all the residents again. Comparisons were analyzed with paired t-test calculation.

Results: Thirty-one internal medicine residents were enrolled. The pre-test completion rate was 94%, and the post-test completion rate was 74%. A 100% of the residents were extremely interested in learning POCUS during residency. Lung, cardiac, and skin-soft tissue exams were skills found most useful to learn in residency. The level of confidence identifying B-lines (pre 3/28, post 8/12), pleural effusion (pre 6/28, post 9/12), probe use (pre 6/28, post 7/12), inferior vena cava measure (Pre 4/28, post 8/12), absent pleural sliding (pre 1/28, post 3/8) increased 30-50%. For the 17 POCUS videos interpretation exam with a maximum score of 17 points, the average post-test score was 6.1 with a standard deviation of 4.3, which was higher than the average pre-test score, which was 4.3 with a standard deviation of 3.7. Paired t-test=-1.532 with two-tailed p-value= 0.132. The power of the two-tailed test alpha= 0.323. There was no statistical significance.

Conclusion: There was an increased confidence and image recognition on internal medicine residents after applying the ACP online POCUS modules. Although there was no statistical significance with low alpha power due to sample size, we observed it improved POCUS image interpretation scores. Therefore, it is crucial to empower residents to learn POCUS as part of their training to deliver a high quality of care.

Research Posters Abstract #6

Abstract Title: Laboratory markers and disease severity in COVID-19 pneumonia, Mayagüez Puerto Rico

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Residency Program: Mayaguez Medical Center

Abstract:

Introduction:

Coronavirus disease 2019 (COVID-19) has represented a challenge for the scientific and medical community. There is currently an urgent need for laboratory markers that allow the stratification of high-risk patients, and evaluation of disease progression. The rapid spread of the disease requires immediate categorization of patients into risk groups in a readily and efficient manner. COVID-19 infection may result in an exaggerated immune response which can be associated with disease severity and development of Acute Respiratory Distress Syndrome. Identifying laboratory markers would be beneficial for the selection of clinical treatment in a timely manner.

Methods:

Our study aimed to investigate COVID-19 pneumonia cases. The objectives included the description of socio demographic and clinical variables of patients, evaluate the progression of laboratory markers across the time; and its association with disease severity. The study design consisted of retrospective cross-sectional, medical record review. Timeframe from March 2020 to December 31th, 2020. Study was conducted at Mayaguez Medical Center; the population included adults patients hospitalized with Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) confirmed by quantitative real-time reverse transcription polymerase chain reaction (RT-PCR) assay, and established diagnosis of COVID-19 pneumonia. Investigated laboratory markers included white blood cell (WBC), neutrophils, c-reactive protein (C-RP), lactate dehydrogenase (LDH), ferritin, procalcitonin, d-dimer, albumin, and aspartate aminotransferase (AST).

Results:

In the studied sample, results demonstrated a median age of 62.5 years in COVID-19 pneumonia patients. Most common associated comorbidities included hypertension, diabetes mellitus type 2, and obesity. Median days with symptoms at presentation were 7 days. There was a significantly higher proportion of men with severe and critical disease; while men had a major incidence of hypertension. Laboratory markers investigation revealed a statistically significant elevation of LDH, Ferritin, and AST on first day of admission in critically ill patients. Statistically significant elevation of WBC, Neutrophils, C-RP, LDH, Ferritin, procalcitonin, and D-dimer was found on last day of critically ill patients; while albumin levels were lower on last day. Age was not a risk factor associated to disease severity.

Conclusion:

The severity of COVID-19 pneumonia can be evaluated early using laboratory markers commonly available in local hospitals like ferritin, LDH, and AST. Those laboratories help to determine the inflammatory body response to the virus; and allows a better treatment allocation according to disease severity. Whereas persistent elevation of WBC, Neutrophils, C-RP, LDH, ferritin, procalcitonin, and D-dimer represents poor prognosis on critically ill patients with COVID-19 pneumonia.

CLINICAL VIGNETTES ABSTRACTS

Clinical Vignettes Abstract #8

Abstract Title: A Case of Pyoderma Gangrenosum: A nearly missed diagnosis

Authors: Reyshley Ramos-Marquez, MD; Giovanni Rivera-Colon, MD; Jossette Axtmayer-Tolosa MD

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Abstract:

Pyoderma Gangrenosum (PG) is a rare disorder with an estimated incidence of 3 to 10 cases per million people per year. PG often occurs in association with a systemic disease such as inflammatory bowel disease, rheumatologic diseases, hematological malignancy and occasionally with diabetes. Due to its presentation and similarities with other ulcers, it is often misdiagnosed as a soft tissue infection. We report a case of a patient with uncontrolled diabetes mellitus who presented with an ulcer initially treated as a diabetic foot infection with antibiotics until a diagnosis twist led to its discontinuation.

Case Report:

This is the case of a 44 year-old male patient with medical history of HTN and uncontrolled Diabetes Mellitus Type 2 (DMT2) who presented to the emergency department with complaint of non-healing ulcer of medial area of right foot associated to copious secretions and erythema which developed rapidly after a trauma. The lesion began as a small papule and then developed into a large ulceration. Vital signs remarkable for tachycardia of 107 bpm and elevated blood pressure of 164/115 mmHg. Blood work non-fasting showed elevated glucose of 648mg/dL, no leukocytosis or other cell lines abnormalities were identified while glycated hemoglobin resulted in 14.3%. Patient was started on long and short-acting insulin, as well as antibiotics, Vancomycin and Zosyn for broad-spectrum coverage in addition to wound care by skin nurses. During admission slow healing was noted and given there was no significant improvement, case was consulted to infectious diseases and dermatology services. Due to the clinical scenario and history of ulcer associated to pathergy phenomenon, pyoderma gangrenosum was highly suspected. Antibiotics were discontinued, hematologic and rheumatologic workup were ordered, including ANA, ANCA, Rheumatologic Factor, Urine electrophoresis, Chest X ray which all resulted negative. In the absence of additional symptoms suggestive of another underlying disease, uncontrolled DMT2 was identified as the most likely cause of this patient PG. Strict regimen of insulin was started and patient demonstrated marked improvement after 2 months.

Discussion:

Pyoderma gangrenosum has a rare presentation and could be considered a diagnostic challenge. It should be considered in patients with sterile lesions with pathergy phenomenon and who are unresponsive to empiric antibiotics. Diagnosis of PG is often made after failure of initial treatment, however an important clue to be considered should be the pathergy phenomenon. The delay in recognition of PG could result in significant infectious complications, cosmetic morbidity, and potential limb amputation. PG should be considered in a patient with non-healing ulcers and once diagnosed other underlying diseases should be investigated since prompt identification and treatment could lead to a better outcome and prognosis, in this case his uncontrolled diabetes.

Clinical Vignettes Abstract #9

Abstract Title: A case of severe community acquired necrotizing pneumonia: the misfortune of an infectious double-trouble

Author: Hector Oliveras Cordero MD Javier García MD, Juan Adams MD, Edilberto Ocasio MD, Noel Torres MD; Humberto Guiot-Martínez MD (FACP)

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Abstract

Community-acquired pneumonia (CAP) is ubiquitously found in the practice of internal medicine. Empiric therapy is guided by the most common pathogens, reason for which rarer etiologies of CAP may not be covered by usual antibiotics. The morbidity and mortality of CAP relies on the patient's underlying conditions and in the need of higher level of care within the hospital. Our case intends to present a case of CAP caused by rare infectious entities with severe complications.

A 52-year-old male without previous medical conditions presented to the Emergency Department (ED) with a 2-month history of productive cough with yellow sputum, right sided pleuritic chest pain, shortness of breath, anorexia, night sweats, fatigue, and weight loss of approximately 20 pounds. The patient had visited another ED where oral antibiotics and antitussives were prescribed. Despite this therapy, the patient's symptoms evolved and he was taken again to the ED with signs of hemodynamic instability requiring vasopressor therapy. He was admitted due to septic shock and was started on broad spectrum antibiotics. As tuberculosis infection could not be excluded, he was placed on isolation and infectious diseases service was contacted. An extensive workup with imaging and laboratory studies was performed. Chest CT was remarkable for multiple bilateral confluent cavitory lesions, almost entirely replacing the right upper lobe, with subtotal involvement of the right lower lobe and subpleural ground-glass nodules at the left lower lobe. Laboratory results did not suggest specific pathologic etiologies or immunosuppressive conditions. Due to the severity of the patient's presentation a bronchoscopy with bronchoalveolar lavage was performed which resulted negative for Mycobacterial species, but positive for growth of *Acinetobacter baumannii* and *Actinomyces odontolyticus*. Antibiotic therapy was tailored to the available susceptibilities and the patient's clinical status improved greatly in a short amount of time. He eventually was discharged with almost complete resolution of his respiratory symptoms after completing treatment with cefepime and doxycycline.

The rapid progression of severe necrotizing pneumonia makes it a particularly dangerous and challenging disease. Although rare, both identified pathogens in our case have been previously identified in literature as causative organisms of pneumonia. The severe imaging findings in our patient and his outstanding response to parenteral antibiotic therapy showcase that is imperative to treat these patients as quickly as possible. The fact that a CAP may present this severely only reinforces the notion that the internal medicine practitioner must have a high level of suspicion to adequately identify and treat infections that, if unnoticed, may become fatal.

Clinical Vignettes Abstract #10

Abstract Title: A life-threatening presentation of factor VII deficiency

Authors: Alexandra Pico-Ramirez MD, Frances Gonzalez MD, Paola Laracuenta MD, Pablo Cantero MD, William Marrero MD, Jose Colon, MD

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Residency Program: University District Hospital (UDH)

Abstract

Factor VII (FVII) is an essential protein in the coagulation cascade synthesized by the liver. Congenital factor VII deficiency is a rare inherited bleeding disorder encountered with an estimated incidence of 1 case per 5,000,000 individuals. Reduced functional activity or deficiency can cause it. In most cases, it is diagnosed by prolonged prothrombin time (PT) with normal partial thromboplastin time (PTT), which a one-stage PT-based assay can confirm for FVII level. Literature establishes 54% of patients are asymptomatic, whereas 22% present with mucocutaneous bleeding. However, there is a poor correlation between factor VII levels and overall bleeding risk.

This is the case of a 39-year-old female with a medical history of hypothyroidism and bipolar disorder who presented to the emergency department due to clinical signs concerning symptomatic anemia. The patient reports a one-year history of recurrent prolonged episodes of epistaxis, spontaneous skin hematomas, ecchymoses, and jaundice. She also referred prolonged history of menorrhagia, easy bruising, and gum bleeding. Physical examination revealed tachycardia, jaundice, and multiple ecchymoses involving the abdomen and right upper and lower extremities. Laboratories found macrocytic anemia of 5 mg/dL requiring various red blood cell transfusions, thrombocytopenia, prolonged PT, normal PTT, elevated ESR and CRP, and hyperbilirubinemia with indirect predominance. Laboratories are also remarkable for elevated reticulocyte count and lactate dehydrogenase, with decreased haptoglobin. Initial differential diagnosis included autoimmune hemolytic anemia, lymphoproliferative disorders, infectious process, among others. However, peripheral blood smear showed no schistocytes, mild spherocytosis, polychromatophilia, poikilocytosis, anisocytosis, and decreased platelets. Further workup revealed Coombs's test positive for non-specific cold agglutinin, with negative infectious disease workup. Because of suspected active bleeding, an abdominopelvic Computed Tomography scan was performed and found hepatosplenomegaly, large right retroperitoneal hematoma, and small perihepatic hemoperitoneum, without arterial source identified. A constellation of findings concerning possible acquired or congenital coagulation factor disorder or lymphoproliferative disorder. Therefore, bone marrow biopsy was performed, which found hypercellular bone marrow and SPEP without monoclonal peak, ruling out hematologic malignancy. Coagulation factor analysis was consistent with decreased FVII activity of 19%, considered as a moderate deficiency. Yet, given spontaneous retroperitoneal hematoma in the absence of trauma, the patient started on FVII therapy replacement leading to a marked improvement in symptomatology and coagulation markers.

Literature establishes that FVII activity levels of at least 15–25% may provide adequate hemostasis. This case hallmarks the extensive phenotypic heterogeneity among patients with Factor VII deficiency, including retroperitoneal bleeding resulting in severe life-threatening bleeds and the importance of early and correct diagnosis. Congenital Factor VII deficiency is a rare cause of bleeding disorder where bleeding risk may not be directly associated with its activity levels. However, it should be suspected in patients with a history of mucocutaneous bleeding despite the age of symptomatology presentation.

Clinical Vignettes Abstract #11

Abstract Title: A Rare Case of 74-Year-Old Man with Pure Red Cell Aplasia Associated with Thymoma

Authors: Jeandelize Rosa, MD; Dannel Diaz Ruiz, MD; Pablo J. López López, MD; Miriam Padilla, MD; Hernan A. Cruz Sánchez, MD

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Abstract

Acquired poor red blood cell aplasia (PRCA) is extremely rare, and the prevalence is currently unknown. PRCA is characterized by the complete or nearly complete cessation of red cell production in the bone marrow without effects on other hematopoietic cells. Secondary PRCA has been associated with several non-lymphoid/non-plasmacytic neoplasms like thymoma. Thymoma is present in approximately 5 to 15 percent of patients with PRCA and is more common in older women. It is generally presenting insidiously, with most individuals lacking signs and symptoms of anemia until the reduction in hemoglobin and hematocrit becomes quite severe, often to a hematocrit of <10 percent.

This is a case of a 74-year-old patient with a past medical history of arterial hypertension who was admitted to our services with the diagnosis of acquired pure red blood cell aplasia. According to the patient, he started three months ago with fatigue, palpitations, and dizziness. Symptoms also were associated with decreased appetite and loss of weight unintentionally during the last six months. In the last three months, he has been diagnosed with symptomatic anemia, receiving multiple transfusions. During that time, a Computerized Tomography of the chest with contrast was made, showing a mediastinal mass. Patient anemia was followed and studied by his Hemato-Oncologist who determined that patient has a Pure Red Blood Cell Aplasia associated with thymoma. Apart from his related symptoms, he denied motor or sensory dysfunction, chest pain, fever, diarrhea, nausea, or vomiting. Laboratory workup was remarkable for normocytic anemia of 3 g/dL and hematocrit <10 percent. Absolute reticulocyte result was low. There were no changes in white blood cell (WBC) or platelet counts, and circulating WBCs appear normal. Iron overload from transfusions contributed, in this case, to high TSAT and high ferritin levels. Regarding the management, we focus on the resection of the mass by a cardiothoracic surgeon. On histopathology there was a type AB thymoma features with spindle cell morphology and a mixture of epithelioid cells and lymphocytes. In our case, radical transsternal thymectomy was the resolution of the patient's anemia.

This case illustrates the challenges faced by physicians to quickly identify and diagnose such unusual paraneoplastic syndromes caused by solid mass. Therefore, an early surgical intervention prevents further complications for the patient. Thymoma resection rarely produces a complete or sustained response, and immunosuppression is typically required. However, resection of the mass in our case was critical because it shows a resolution of the anemia and could progress to multiple complications or even death if left untreated. The patient was followed in an outpatient clinic and showed marked improvement. Hence, this report reinforces the importance of thymectomy as a solution of pure red cell aplasia associated with thymoma.

Clinical Vignettes Abstract #12

Abstract Title: A single enhancing brain lesion: are you sure it is toxoplasmosis?

Authors: Gabriela Negron-Ocasio; Santiago-González, Juan C; Ortiz-Troche, Stephanie; Reimon-Garcia, Luis; Gonzalez-Morales, Camille; Colon-Marquez, Jose

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Abstract

The leading diagnostic considerations for patients with Human Immunodeficiency Virus (HIV) presenting with single brain mass lesions include Central Nervous System (CNS) toxoplasmosis and primary CNS lymphoma. However, they may have an overlapping presentation and neuroimaging appearance, making the diagnosis of one versus another challenging. The diagnosis of Toxoplasmosis can be made presumptively, without biopsy. However, specific criteria must be met. Patients must have a CD4 count < 100 cells/mm³, a compatible clinical picture, like headache, confusion, lethargy, a positive *Toxoplasma gondii* IgG antibody, and brain imaging that demonstrates multiple rings enhancing lesions.

Here we present a case of a 39-year-old female with HIV who recently started on Highly active antiretroviral therapy (HAART) who arrived at the emergency department with a painful facial vesicular rash and a severe headache described as stabbing associated with general malaise and nausea, without other systemic symptoms. Vitals and physical exam were unremarkable, except for right-sided facial palsy and vesicular rash, in a dermatomal distribution, consistent with herpes zoster. Prior laboratories notable for CD4 count at 278 cells/mm³ and Viral Load: 322,143 copies/mL. Due to neurological symptoms, Brain MRI was performed. He was striking for heterogeneous rim enhancing lesion at the left caudate area with mass-effect, which primary diagnostic considerations included CNS toxoplasmosis and CNS lymphoma. Due to its basal ganglia location and absence of restricted diffusion. The patient was started on acyclovir for herpes zoster and TMP-SMX for empiric coverage of Toxoplasmosis. An an ti-edema regimen was implemented using dexamethasone to aid with mass effect. Laboratory workup was eventually notable for a negative PCR, IgG, and IgM titers, making the diagnosis less likely. However, repeated brain MRI two weeks after starting antibiotic therapy was remarkable for interval decrease in size, mass effect, and associated edema of single left caudate brain mass, suggestive of treatment response. Further evaluation of lesion was performed with MR Spectroscopy; findings were noteworthy for dominant choline peaks and a lipid-lactate peak within the lesion, which favored CNS lymphoma. The lesion biopsy showed a phenotype to the microorganism *toxoplasma gondii* and was positive for the *toxoplasma* antigen.

This case resembles the importance of brain biopsy in diagnosing and managing patients with HIV who are immunocompromised and present with a single brain lesion whose clinical findings don't meet the criteria to make a presumptive diagnosis of Toxoplasmosis. The vast majority of patients with CNS Toxoplasmosis are seropositive for anti-toxoplasma IgG antibodies; however, the absence of antibodies to toxoplasma makes the diagnosis less likely but does not rule out the possibility of CNS toxoplasmosis; for a definite diagnosis. However, when the presentation is atypical, a biopsy should be performed.

Clinical Vignettes Abstract #13

Abstract Title: Recurrent Acute sialadenitis secondary to Hydrochlorothiazide

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Abstract

Parotitis is an infection of one or both parotid glands characterized by enlargement, swelling, and erythema surrounding the gland. The most common etiologies are viral, bacterial, duct obstruction, and systemic causes such as Sjogren's syndrome. Another less known etiology is Drug-induced parotitis, but several case reports have documented it. Most documented cases of medications implicated in the development of parotitis include

anticholinergics, antihistamines, and antipsychotics. Although in a smaller number of cases, some antihypertensive drugs have been involved in the development of parotitis. Here, we present the case of a 55-year-old man with recurrent parotitis attributed to using a first-line medication in the treatment of hypertension.

A 65-year-old man with a history of hypertension and triglyceridemia arrived at the Emergency Department (ED) with a complaint of painful inflammation of the parotid gland of two weeks of evolution. The pain was located in the lower-left cheek, described as stabbing, constant, worse with chewing, and mouth opening, associated with a bad taste in the mouth. The physical examination revealed induration of the left cheek, with associated pain and occasional suppuration of purulent saliva from the ductal orifice when manipulating the gland. Maxillofacial computer tomography for left parotid gland superficial lobe calcified focus within the parotid duct, with fat stranding and thickening of overlying skin and associated rim enhancing fluid collection along with left masticator muscle. The patient had been followed for the past three years by an otolaryngologist for recurrent episodes of sialadenitis, multiple trials of oral antibiotics without complete resolution or apparent etiology. At times attacks have been complicated by the development of abscesses of adjacent structures. The patient was admitted to internal medicine service for the administration of intravenous antibiotics and possible intervention. Upon further questioning, no other risk factors were identified, except for the use of Hydrochlorothiazide (HCTZ) which started 3.5 years ago, coinciding with the episodes. After HCTZ was discontinued, the patient was reassessed months later, and there were no recurrent symptoms, and no new stones were identified.

The side effects of this drug are well studied and documented in the literature; cases of parotitis secondary to sialadenitis represent less than 2% of the population. When evaluated under the Naranjo Probability Scale, our case qualifies with a probable category of parotitis secondary to HCTZ. This case serves to raise awareness of this potential poorly described hydrochlorothiazide-related side effect that could result in a significant burden on patients.

Clinical Vignettes Abstract #14

Abstract Title: Acute Renal Hepatitis; This Makes No Sense!

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Abstract

Acute hepatitis A is usually a mild self-limiting hepatic infection, but in atypical cases it can lead to severe complications such as acute renal failure (ARF), blood dyscrasias, and fulminant hepatitis. Although ARF is a common manifestation of fulminant hepatitis, the development of ARF in nonfulminant hepatitis A is rather a seldom event.

Hereby, we present a 52 y/o male with acute hepatitis A who achieved positive outcomes despite kidney deterioration.

52 y/o male with PMH of hypertension, alcoholism, and IVDA who presents with generalized malaise, abdominal pain (RUQ), anorexia, vomits, dark urine, and fever for the past 4-7 days. VS normal. PE with jaundice, and nontender abdomen. CBC normal. CMP BUN 21 mg/dL, and Cr 3.05 mg/dL. U/A Pr > 300 mg/dL and large bilirubin. Urine spots FeNa+ 7.6%. LFTs AST 1848 IU/L, ALT 2828 IU/L, ALP 118 IU/L, Albumin 2.8 gr/dL and TBIL 6.63 mg/dL (Direct 4.59/Indirect 2.04). GGT 152 IU/L, and CPK 60 U/L. Amylase and Lipase normal. PT 18 sec, INR 1.37, PTT 50.6 sec. CRP 6.65 mg/dL. Abdominal ultrasound and CT with cholelithiasis, hepatomegaly, hepatic steatosis, and splenomegaly. Renal ultrasound normal. Admission presumptive diagnoses were acute viral hepatitis versus leptospirosis. Through the course of the first week symptoms improved with fluids and ceftriaxone but renal function continued deteriorating (Cr 3.05 -> 9.76). Aminotransferases rapidly improved with AST 1848 -> 171, and ALT 2828 -> 805, in contrast to ALP and TBIL both of which trended down slowly. Leptospirosis (IgM), HBV (core IgM and Bs Ag) and HCV (IgG/IgM), all negative. Hepatitis A (IgM) positive. Hepatitis A was diagnosed. Gastroenterologist recommended leptospirosis IgM repetition prior to ceftriaxone discontinuation with a second negative result. Nephrologist suspected interstitial nephritis as seen in infectious, and/or autoimmune diseases. ANA, DS-DNA, C3 & C4, RPR, UPEP, and SPEP, all normal. ARF secondary to hepatitis A was concluded. At the end of the second week liver and kidney functions significantly improved with AST 34, ALT 62, ALP 105, TBIL 1.86, and Cr 1.99 upon discharge.

This case demonstrates how hepatitis A in association with ARF should probably be considered an underreported entity rather than an unusual event, based on limited America's literature with most case reports originating from Asia with an incidence of < 5%. Upon new emerging cases and/or outbreaks in our territories, physicians should be aware of ARF as a potential complication of this condition thought to be self-limiting. Interestingly upon literature review patients with ARF were predominantly male, alcohol drinkers, with coagulopathy, high aminotransferases, bilirubin, and CRP. All characteristics present in our patient. Finally we believe that the mechanisms of injuries, risk factors, and prevalence of kidney injury remain to be elucidated, particularly in the United States

Clinical Vignettes Abstract #15

Abstract Title: An Immune Reconstitution Inflammatory Syndrome Uncovering a Disseminated Mycobacterium Avium Complex Mimicking a Lymphoproliferative

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Abstract

It is well known that Human immunodeficiency virus (HIV) patients are at an elevated risk for opportunistic infections and development of malignancies such as lymphoma. Since the introduction of antiretroviral therapy and antimicrobial prophylaxis the incidence and prevalence of these diseases have decreased substantially. Its identification and diagnosis are crucial since a delay in management could result in increased mortality and morbidity. Here we present a vignette that showcases how an infectious pathogen mimics a malignant process in an HIV patient.

This is a 41-year-old male patient with a medical history of untreated HIV, intra-venous drug user, and hypothyroidism who presented to the ER complaining of general malaise, fever, chills, joint pain, weight loss, SOB, and non-productive cough associated with non-radiating sharp persistent pleuritic chest pain of one month of gradual evolution. Patient had started anti-retroviral therapy four weeks ago. Physical examination was remarkable for Velcro-like sounds upon auscultation and axillary and inguinal lymphadenopathy. Vital signs were essentially unremarkable. Laboratories were remarkable for adequate white blood cell count of 7.09 Thou/uL and an absolute lymphocyte count of 383, CD4 count of 20, and adequate renal function. Chest CT showed nonspecific diffuse mediastinal and bilateral hilar lymphadenopathy associated with multiple subcentimeter solid pulmonary nodules distributed diffusely throughout the bilateral lungs. ABD/PLV CT showed a diffuse mesenteric, peri-aortocaval, bilateral inguinal, and bilateral perihilar lymphadenopathy. These findings were highly suggestive of an underlying lymphoproliferative process such as lymphoma but in view of the presence of infectious symptoms, immunocompromised state, and O2 dependence the patient was admitted with a brought differential diagnosis of a developing infectious or neoplastic process. At this time TMP-SMX was started for Pneumocystis pneumonia in conjunction to coverage for a community acquired pneumonia. Once COVID19, bacterial, fungal, and Mycobacterium Tuberculosis were ruled out with a bronchoalveolar lavage, the patient was taken to OR for an open lymph node biopsy. To our surprise, the pathology came positive for Mycobacterium avium complex (MAC) conferring a diagnosis of disseminated disease. Patient was subsequently started on Azithromycin, Rifampin and Ethambutol with close follow up at his outpatient HIV Clinics.

This vignette illustrates a disseminated MAC-associated immune reconstitution syndrome (IRIS) since the patient reported starting antiretroviral therapy four weeks before the apparition of the symptoms. MAC associated IRIS prevalence has decreased substantially now being at 3.5 %. It is crucial to continue to take into consideration this pathogen in every patient with AIDS since its presentation could mimic a lymphoproliferative disorder and a delay in treatment could be detrimental.

Clinical Vignettes Abstract #16

Abstract Title: Status Migrainous: An Atypical Presentation of Severe Hypothyroidism

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Abstract

Countless etiologies of chronic headache exist, including organic causes and psychosocial stressors. The initial evaluation of chronic headache in an adult can become a strenuous challenge and may sometimes result in invasive diagnostic studies. When a secondary etiology is missed, unnecessary drugs may be prescribed with hazardous side effects and little or no resolution of the symptoms. We present a case of a patient with status migrainous as presentation of a decompensated endocrinopathy.

A 53-year-old female patient with arterial hypertension, idiopathic intracranial hypertension, and history of chronic migraine, was evaluated in the ER for severe headache that progressed over three months. The pain was described as pulsatile, bi-frontal, disabling, and associated with nausea /vomiting, phonophobia, and photophobia. Vital signs showed no bradycardia or hypotension. The patient appeared frail and chronically ill. Head and neck evaluation showed no masses or scars. Neurologic examination showed intact sensation, adequate reflex, and no slow mentation or focal weakness. Fundoscopic eye exam was remarkable for papilledema. Laboratories showed no cytopenias or electrolyte disturbances. Head CT with and without contrast was remarkable for an empty sella turcica. No masses, lesions or anatomic abnormalities were present. The patient was admitted to the internal medicine ward for pain management after initial therapy at ER level failed to improve symptoms. Neurology Service was consulted for recommendations. A diagnosis of status migrainosus was made and medical abortive therapy was initiated. Lumbar puncture was also performed. After 48 hours of optimal medical therapy, the patient reported persistent symptoms. Thyroid-stimulating hormone and free T4 were 133.175 uIU/mL (n; 0.5 to 5.0 mIU/L) and 0.50ng/dL (n; 0.8 to 1.8 ng/dL) respectively. No hypotension, bradycardia or lethargy was present to suggest myxedema coma. Weight-based intravenous levothyroxine was started for severe hypothyroidism. After 48 hours of hormone replacement, the headache gradually subsided which suggested severe hypothyroidism as the etiology of the status migrainosus. After normalization of serum thyroid hormones, the patient was discharged home with adequate oral thyroid hormone replacement.

This case illustrates a unique presentation of severe hypothyroidism as status migrainosus. In view of the multiple comorbid conditions in this patient including idiopathic intracranial hypertension and chronic migraine, it was a diagnostic challenge. The pathophysiology of the hypothyroidism associated headache is not well known but its presence affects approximately 30% of the patients suffering from this hormone deficiency. The early identification of this phenomenon as presentation of hypothyroidism could prevent debilitating symptoms as observed in this patient. Thus, it is important to establish the etiology to avoid invasive and unnecessary workup, which will result in psychological distress and excessive healthcare costs.

Clinical Vignettes Abstract #17

Abstract Title: Anti-Ganglioside Antibody-Negative Guillain-Barre Variant Overlap Syndrome

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Abstract

Introduction

Guillain-Barré Syndrome (GBS) is an acute autoimmune-mediated peripheral neuropathy with a classical presentation of an ascending symmetric flaccid paralysis with hyporeflexia preceded by an upper respiratory or gastrointestinal infection. An array of GBS variants have been described in the literature. The pharyngeal-cervical-brachial (PCB) variant of GBS is defined by an oropharyngeal and cervicobrachial weakness, upper extremity hyporeflexia and rapid progression. Another severe form of GBS variant acute motor and sensory axonal neuropathy (AMSAN) can present with rapid progression of distal muscle weakness, hyporeflexia and decreased sensation leading to quadriparesis. GBS variants have low prevalence, presenting a challenge to physicians to establish a diagnosis. In this work, we describe a rare presentation of GBS overlap syndrome, which was negative for all classical work-up studies and diagnosed based on clinical presentation and EMG studies.

Abstract

A 56 years old male patient with a past medical history of hypertension, hyperlipidemia, hypothyroidism and panic attacks arrived at the emergency department due to bilateral proximal upper extremity weakness of one week of evolution. Patient recently started an aggressive exercise program consisting of lifting weights. He denied shortness of breath, fever, chills, diarrhea, nausea, vomiting, recent illness, sick contacts, or use of supplements. Physical exam pertinent for 2/5 in bilateral arm strength with preserved cerebellar signs, sensation, cranial nerves and deep tendon reflexes. An initial diagnosis of myopathy was considered including Inclusion Body Myositis evaluated with muscle biopsy. Head CT without acute intracranial hemorrhage or transcortical infarct. Cervical MRI without cord compression. Electroencephalogram was unremarkable. Toxicology, EBV, CK, CMV, TSH, Vit D, Vit B12 and HIV results unremarkable. Electromyogram (EMG) suggested neuropathy concerning for demyelination. Patient reported muscle weakness progression with distal muscle extension and lower extremity involvement. Workup of GBS variants was also considered due to rapid progression and atypical presentation of symptoms. Lumbar puncture without albuminocytologic dissociation. Progression noted with hyporeflexia, decreased sensation and bulbar involvement. The patient was transferred to the ICU and was intubated due to impending respiratory failure. IgG/M anti-GT1a, IgG/M anti-GQ1b, IgG/M anti-GM1, IgG/M anti-GD1 antibodies and *Campylobacter jejuni* titers were negative. Muscle biopsy revealed rare degenerating/regenerating fibers with macrophages and increased lipid storage in myofibers. Lipid storage disorder was ruled out as subsequent workup was negative for inborn errors of metabolism. Patient continued to deteriorate despite IV immunoglobulins and steroids treatment. Second EMG/NCS revealed axonal pattern consistent with (AMSAN). The possibility of PCB-AMSAN variant overlap of GBS was considered. Hospital stay was complicated with bacteremia, aspiration pneumonia, depression, respiratory failure and death. This case emphasizes the importance of considering GBS variants in atypical presentations of an acute rapidly progressive neurologic disease.

Clinical Vignettes Abstract #18

Abstract Title: Atypical Chest Pain in an Obese Patient

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Abstract

Pulmonary Langerhans Cell (LC) Histiocytosis (PLCH) is an uncommon cystic interstitial lung disease of unknown etiology characterized by the infiltration of the lungs by myeloid dendritic cells and accompanied with a solid inflammatory response. Somatic oncogenic mutations occur in the pulmonary CD1a dendritic and their progenitor cells, CD34+ mononuclear cells in the mitogen-activated protein kinase (MAPK) pathway, particularly the BRAF. The exact incidence and prevalence of the disease are unknown but affect primarily young smokers of Caucasian descent. No occupational or geographic predisposition has been reported to this date.

We present a case of a 49-year-old obese man who came to the ER complaining of left lower costal chest pain and dyspnea on exertion. Initial laboratory results and radiologic studies showed changes consistent with chronic obstructive pulmonary disease. As part of the hospitalization workup, dobutamine stress myocardial perfusion imaging revealed findings suggestive of inferolateral wall myocardial ischemia and adequate global left ventricular function at rest. Chest computed tomography angiography ruled out pulmonary embolism. Spiculated lesion biopsy was negative for malignancy. The identification of Langerhans' cell granulomas by surgical lung biopsy was the definitive diagnosis.

The patient was treated with nebulized bronchodilators, intravenous steroids, antibiotics, and supplemental oxygen. Since oxygen saturation persisted in the range of 86-88%, cardiac catheterization was performed. Pulmonary hypertension was diagnosed with a mean pulmonary artery pressure of 31 mmHg, normal pulmonary capillary wedge pressure of 6 mmHg, and normal left ventricular end-diastolic pressure of 9 mm Hg. The patient responded well to riociguat treatment, a stimulator of guanylate cyclase.

This case shows the importance of correctly identifying the symptom's etiology and not confusing it with other conditions, which could delay proper treatment. The diagnosis of pulmonary hypertension is delayed for 2-3 years when a patient comes with chest pain and SOB to the clinic. Signs and symptoms of PLCH are nonspecific and often mimic other conditions, such as more common pulmonary diagnosis.

The survival of this disease is good, with most reports showing a five-year survival estimate above 75 percent with an early diagnosis. To this date, there are no other cases of pulmonary hypertension due to Langerhans's cell histiocytosis published in Puerto Rico.

Clinical Vignettes Abstract #19

Abstract Title: Bilateral Oculomotor Nerve Palsy: A Rare Presentation of Burkitt Lymphoma in an HIV-Positive Patient

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Abstract

Individuals infected with human immunodeficiency virus (HIV) are at an increased risk of malignancy, even with highly active antiretroviral therapy and a suppressed viral load. Burkitt lymphoma (BL), an aggressive subtype of non-Hodgkin lymphoma (NHL), may present initially with neurologic symptoms and abnormal findings in the cerebrospinal fluid (CSF) and neuroimaging.

This is the case of a 65-year-old man, with HIV infection of over 20 years, who presented with complaints of worsening diplopia of 3 weeks of evolution (later identified as bilateral oculomotor nerve palsy). No associated findings were identified on neuroimaging. Initially, the patient was misdiagnosed with wall-eyed bilateral internuclear ophthalmoplegia (WEBINO) but commonly associated findings such as midbrain ischemic infarcts and masses were not observed on magnetic resonance imaging or computed tomography angiography. Labs were remarkable for elevated ESR (73 mm/h) and CRP (26.2 mg/L). CD4 count was 264 cells/mm³ and viral load was undetectable. An elevated white blood cell (WBC) count of 125/ μ l with mononuclear predominance (97%) and protein level of 111mg/dL were observed in CSF, suggesting an infectious vs inflammatory etiology. Intravenous immunoglobulin (IVIG) was initiated for preemptive management of potential neuromuscular disorder, but symptoms did not improve. Myasthenia Gravis and Miller Fisher syndrome workup returned negative, IVIG therapy was then discontinued. CSF cytology was remarkable for atypical lymphoblasts, and cytometric flow results were consistent with B-cell malignancy. History and physical examination were absent of B-symptoms (fever, "night sweats", and loss of 10% body weight in the previous 6 months) and palpable masses. The patient had prior exposure to Epstein-Barr virus (EBV) as per antibody tests. A CT scan of the chest, abdomen, and pelvis demonstrated multiple lymphadenopathies, which biopsy confirmed to be Non-Hodgkin lymphoma, specifically BL.

Prior to beginning chemotherapy, the patient unfortunately expired of unknown causes on hospitalization. Given the aggressive clinical course of BL, and its prevalence in HIV-infected patients, meningeal invasion of neoplasia should be in the differential diagnosis of an HIV-positive patient presenting with cranial neuropathies and unremarkable imaging.

Clinical Vignettes Abstract #20

Abstract Title: Caroli's disease and Kassabach-Merrit syndrome: An unusual cause of Upper Gastrointestinal Bleeding

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Abstract

Caroli's disease (CD) is a rare congenital disease characterized by diffuse polycystic dilation of intrahepatic bile ducts. The approximate incidence of this condition is one in a million in the general population. Patients could present with recurrent cholestasis and cholangitis, and they have an increased risk of liver fibrosis, portal hypertension, and cholangiocarcinoma. Variceal bleeding is one of the most dangerous complications. Here, we report a case of a 32-year-old male with Kasabach-Merritt syndrome (KMS) who presented with life-threatening gastrointestinal bleeding.

A 32-year-old male patient with a medical history of KMS, liver fibrosis with esophageal varices, and cholecystectomy presented to the emergency department with hematemesis. Upon arrival, vital signs with borderline low blood pressure and tachycardia. Physical exam with conjunctival paleness, icteric sclerae, abdominal discomfort, and decreased capillary refill. The patient has a history of multiple endoscopic band ligations for prior esophageal variceal bleeding. Laboratories were remarkable for pancytopenia, transaminitis, direct bilirubin at 2.8 mg/dL, indirect bilirubin 2.73mg/dL, and alkaline phosphatase 1562 U/L, with preserved coagulation parameters. No family history of congenital disease. Intravenous hydration, antibiotics, proton pump inhibitor, and Octreotide infusion were started.

Esophagogastroduodenoscopy (EGD) showed extensive fibrotic tissue and esophageal varices, which required banding. Two days later, the patient developed another episode of hematemesis and melena with a significant drop in hemoglobin. EGD was repeated and found a large esophageal ulcer secondary to the extent of esophageal fibrotic tissue. This limited the ability to banding, as there was an increased risk of perforation. MRCP showed worsening intrahepatic duct dilation with multiple intrahepatic, extrahepatic, and intraductal calculi in addition to prominent periportal fibrosis. Due to the increased risk of cholangiocarcinoma and MELD NA score of 18, the patient was referred to a liver transplant center.

CD and KMS are rare causes of liver diseases and could present challenging scenarios for acute management, as in our patient. Associated symptoms may include jaundice, ascites, pruritus, and abdominal pain. Due to the lack of specificity of clinical symptoms, the diagnosis of CD mainly relies on imaging studies, such as MRI, CT scan, or ultrasound. A comprehensive clinical examination and proper evaluation are essential in these patients. Recognizing findings related to this disease could lead to an early diagnosis, prompt management, and adequate liver transplantation referral to avoid severe complications.

Clinical Vignettes Abstract #21

Abstract Title: Deeply Superficial: A Rare Cause of Dysphagia

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Abstract

Esophagitis dissecans superficialis (EDS) is a rare clinical endoscopic finding characterized by sloughing of large fragments of the esophageal squamous mucosa. The majority of cases are idiopathic. However, it has been associated with conditions such as pemphigus vulgaris, malignancy, esophageal trauma and medications (bisphosphonate, NSAIDs or doxycycline). Patients may be asymptomatic or present with dysphagia, nausea, bleeding, vomiting, heartburn and odynophagia. Diagnosis is made by endoscopic findings of peeling, white, vertical strips of epithelium >2 cm long. Biopsy aid in diagnosis with evidence of necrosis of the superficial layer mucosa leading to separation of this layer from the underlying basal mucosa. Here, we present a case of an 87y/o male with esophagitis dissecans superficialis.

An 87 year-old male with medical history of hypertension and osteoporosis on alendronate came to the ER due to vomiting and dysphagia that began in the past week. He had multiple visits to ER in the past, where he was discharged with suspected gastroenteritis. Due to a lack of improvement and evidence of an acute kidney injury, dehydration and PO intake intolerance he was admitted to ward. He reported feeling food stuck at mid esophagus with subsequent vomiting. Chest and neck CT showed circumferential esophageal wall thickening concerning for underlying malignancy and proximal to mid esophagus filled with fluid and debris. Endoscopy was performed with evidence of EDS. High dose PPIs and holding alendronate were recommended. Symptoms resolved and a follow-up EGD showed no evidence of EDS.

EDS a rare disease characterized by endoscopic findings. Although it is a benign condition, the endoscopic appearance is impressive, and imaging may suggest malignancy. Patients can present with acute dysphagia and inciting factors should be considered. Most cases are idiopathic but may also be secondary to complication of rigid endoscopy with esophageal dilation, celiac disease, immunotherapies, ingestion of ferrous sulfate or bisphosphonates, among others. Our patient was using alendronate known to cause esophagitis which was the most likely etiology. Treatment consist of discontinuing culprit medications and anti-acids (PPIs) may aid in symptoms. Follow-up EGD should be schedule. Due to the profound effects of acute dysphagia, odynophagia and the impact on quality-of-life awareness of this rare endoscopic finding is important and can't be underestimated.

Clinical Vignettes Abstract #22

Abstract Title: Dilated cardiomyopathy: an unusual case related to chronic olanzapine use

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Abstract

Dilated cardiomyopathy is a condition more commonly associated with ischemic heart disease, hypertension, viral diseases, diabetes, alcohol, pregnancy among others. Most patients present between the ages of 20-60 with symptoms of heart failure such as impaired exercise capacity, orthopnea, and peripheral edema.

We report a case of a 45 y/o Latin-American male with progressive shortness of approximately 3 months of evolution, associated with lower extremity edema, palpitations, and abdominal distention. He denied other symptoms or previous episodes. Past medical history pertinent for obstructive sleep apnea with compliance of CPAP machine, major depressive disorder with psychosis, and general anxiety disorder for 20 years on chronic Olanzapine, Temazepam, Fluoxetine and Clonazepam. Physical examination was significant for an obese patient with BMI 37.7, borderline normal blood pressure, tachypnea, bradycardia with heart rate in 50, bilateral expiratory crackles and bilateral 2+ pitting edema in lower extremities. Patient failed a trial of BIPAP and required mechanical ventilation. His course was complicated with hypotension requiring vasopressors. Bloodwork showed positive Coxsackie IgG titer, low protein C and S, low anti-thrombin and elevated pro-BNP. Other tests including homocysteine, an ti-cardiolipin, Factor V, hepatitis Panel, HIV, lipid panel and urine toxicology were negative. Chest X-Ray with pulmonary edema and pleural effusion. Chest CT angiography showed cardiomegaly but no evidence of pulmonary embolism. Transthoracic echocardiogram revealed an Ejection Fraction of <25% with severe global hypokinesia and moderate to severe mitral regurgitation. Right Heart and Left heart catheterization (LHC) were remarkable for increased pressures in all chambers and vasculature, wedge pressure 25 mmHg and Pulmonary artery pressures of 41/29 (35). LHC negative for coronary artery disease, but confirms 2D echo findings. While trying to achieve a central line, a non-depressible lesion was seen in the internal jugular vein (IJV) confirmed by official vascular studies as an acute thrombus of the IJV with an additional finding of a non-occlusive acute thrombus in the subclavian vein. Patient's CHF was treated with Lasix, spironolactone, metoprolol, and ACE with an improvement of symptoms and weaning off mechanical ventilation and vasopressors. The right internal jugular vein thrombus was treated with apixaban. After discussion with psychiatry, Olanzapine dose was reduced as it could not be discontinued since patient failed other antipsychotics therapy. He was ultimately discharged with defibrillator, anticoagulation, and optimal CHF therapy.

This case highlights the importance of less common causes of dilated cardiomyopathy. As per literature, Olanzapine is related to significant adverse effects for example agranulocytosis, toxic megacolon and cardiac complications, myocarditis and dilated cardiomyopathy. Mechanism of action of olanzapine-induced cardiomyopathy is still vague and lacks consensus in the scarce literature researched and although rare, it has been described in post-marketing reports. Cardiac function is recommended to be monitor routinely in patient with use of Olanzapine.

Clinical Vignettes Abstract #23

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Abstract Title: “From Cure to Poison” – the importance of asking the right questions.

Abstract

Delirium is a disturbance in mental abilities that results in confused thinking and reduced awareness of the environment with the patient being unable to control its behavior. It results from a variety of contributing factors and etiologies including age as the most common, chronic illness, metabolic and electrolyte disturbances, sepsis, prolonged hospitalization, surgery and in the younger population alcohol or drug intoxication or its withdrawal.

We present the case of a 61-year-old male with medical history of Obstructive Sleep Apnea and Lumbar Radiculopathy who arrived to urgency room after being found at home in a rigid position, with altered mental status and with a loud snore for 15 minutes without recall such events. Witness cannot recall any involuntary movements or loss of sphincters. History was limited given patient's presentation. Vital signs: BP: 116/70 O₂sat 97% RR:27 bpm HR:73 Temp:37.1C. Physical examination was remarkable for visual and auditory hallucinations, bizarre behavior with improper laughing, bilateral resting tremors and involuntary movements without loss of consciousness; this presentation was intermittent during the day and benzodiazepine was administered without response. Laboratories were negative for electrolyte disturbances, unremarkable CPK, negative toxicology and urinalysis. Head CT scan, EEG and MRI were negative for acute intracranial pathology. Lumbar puncture was found with normal prote in and glucose; negative for infectious or autoimmune process. Neurology and Psychiatry were consulted, but a specific diagnosis was not obtained given patient's clinical and laboratory presentation. While on lucid period patient denied any use of drugs, alcohol or trauma. He did recall having a similar episode about 2 months ago. Family members were asked to bring all medications from home and an empty bottle of 120 caps of Fioricet were found dispatched 10 days prior to this presentation. Given above findings, diagnosis of Barbituric Withdrawal was made, and patient was treated with Phenobarbital as per Fioricet withdrawal protocol with complete resolution of symptoms.

This case become one of the few cases of severe withdrawal symptoms associated to Fioricet, a widely prescribed and highly addictive medication to treat migraines which have a short to intermediate duration of action. From investigation it was noted that Internet also allows for the unsupervised purchase of medications that may have neurologic consequences. This case report is intended to highlight the importance of a thorough history of present illness, prompt involvement of family members/caregivers and increase awareness on patient education regarding medication side effect, potential dependence, and withdrawal. Early recognition of uncommon withdrawal symptoms such as hallucination, confusion and anxiety is required as it can lead to severe consequences such as coma and even death. In turn, this will aid to avoid delay of treatment and incurring in high-cost diagnostic test.

Clinical Vignettes Abstract #24

Abstract Title: Here It Comes Again! A Rare Case of Recurrent Lymphocytic Meningitis Caused by Herpes Simplex Virus Type 1

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Abstract

Aseptic meningitis is characterized by a serous inflammation of the linings of the brain that may present with headache, photophobia, meningismus, myalgias, fever, nausea, vomiting, and occasional transient neurologic findings. CSF analysis normally reveals a polymorphonuclear pleocytosis which may increase up to several thousand cells/mL early in the course of illness usually followed by a lymphocytic predominance.

We present the case of a 51 year old woman with a medical history of hypertension, hypothyroidism, and pneumococcal antibody deficiency who presented with recurrent hospital admissions due to signs and symptoms concerning for meningoencephalitis. In the span of one year, the patient was admitted four times due to similar symptoms. Her usual presentation consisted of severe headache, subjective fever/chills nausea, emesis, blurry vision, and upper extremity weakness followed by paresthesias. Four different lumbar punctures were performed, all with negative gram stains and cultures. CSF analyses with lymphocytic pleocytosis with mildly elevated protein and no hypoglycorrhachia in all but one sample which showed mixed cell pleocytosis, mild hypoglycorrhachia, and elevated protein levels. Meningoencephalitis panel and Brain MRIs performed during every admission were always essentially unremarkable. HIV, RPR, CSF VRDL, PPD, and cryptococcal antigen (serum and CSF) were all negative. Of importance, during the first admission, Herpes Simplex Virus (HSV) 1 PCR in CSF resulted positive. This result was received after the patient presented with symptom resolution without antiviral treatment. On 3 out of 4 hospitalizations, the patient received empiric antibiotic therapy for meningitis and on 2 out of 4 she received Acyclovir IV. Symptom resolution was always seen within a few days from admission.

Recurrent lymphocytic meningitis, also known as Mollaret's meningitis, is a rare disease, characterized by recurrent episodes of aseptic meningitis that usually last 3 to 5 days and recover spontaneously. Paresthesias, neuropathic pain, arthralgias, and urinary dysfunction are common during and after meningitis. Since the development of polymerase chain reaction (PCR) technologies, studies have found evidence of HSV DNA in the CSF of many of these patients. In most cases, HSV type 2 was detected, however, less frequently HSV type 1 DNA has been isolated. It is important to maintain a high index of clinical suspicion in patients with recurrent neurologic symptoms without clear identified etiology in order to recognize this condition and avoid overuse of unnecessary treatments, such as antibiotics. While some reports suggest that treatment with antiviral medications may alleviate symptoms, the actual effectiveness of treatment has not been well established. More studies are needed to better understand this condition, how to treat it, and effectively prevent recurrences and improve quality of life in affected patients.

Clinical Vignettes Abstract #25

Abstract Title: “Here We Go Again!” A Case of Double Parathyroid Adenomas after Minimally Invasive Parathyroidectomy.

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Residency Program: Hospital Damas

Abstract

Parathyroid adenomas are the most common cause of Primary Hyperparathyroidism (PHPT), constituting about 85% of cases. Surgical resection is the only curative management. However, there are cases of recurrent hypercalcemia in which upon further investigation yield a second parathyroid adenoma. Double Parathyroid Adenomas (DPA) are often confused with parathyroid hyperplasia, as histologically there are no differences, but DPA are a distinct entity that occurs more often in elderly population, as in our case. DPA has an incidence of 2-15% and must be accounted for when persistent or recurrent hypercalcemia is found.

This is the case of a 71 year old female presenting to the Endocrinologist, referred by her PCP after being found two months prior with hypercalcemia, elevated PTH, and an ankle fracture sustained on 2014. Patient denied polyuria, polydipsia, renal stones, bone pain, constipation. Past medical history of arterial Hypertension, Hyperlipidemia, Hypothyroidism and colon cancer and a non-contributory family history. Patient’s laboratory work-up showed calcium level: 11.01 mg/dL, and PTH: 202 pg/mL. A DEXA scan was done which showed a decreased Bone Mineral Density (BMD) on forearm, with a T score: -3.4, AP Spine T core: -2.7, and Femur neck T-score: -1.8. Patient met two criteria for surgery and was sent for sestamibi scan (SPECT), which showed a parathyroid adenoma on the inferior pole of the right thyroid lobe. Patient was sent for Minimally Invasive Parathyroidectomy (MIP) by a specialized thyroid surgeon, after which, symptoms of hypercalcemia resolved. Follow up DEXA scan showed significant improvement of BMD. Three years after the MIP, patient was noted to have high calcium again as well as high PTH on follow up laboratory values. She was sent, once again, for sestamibi test which showed a second parathyroid adenoma this time on the inferior pole of the left thyroid lobe, which was surgically removed as well via MIP by the same surgeon.

This case is important as it shows how DPA, although not very common, can be present years after surgical resection of the original adenoma. It also serves as another example of how essential it is to continue monitoring calcium and PTH levels despite having MIP, and allows for reassurance on how beneficial measuring Intraoperative Parathyroid Hormone (IOPTH) levels can be in detecting another adenoma on the first surgical intervention. This case exemplifies how small and suppressed parathyroid glands may become hypersecretory if not removed along with the bigger adenoma. Thus, shows the importance of integrating IOPTH and bilateral neck exploration as part of the routine evaluation in patients with parathyroid adenomas

Clinical Vignettes Abstract #26

Abstract Title: Hidden Creatures: A Case of Emphysematous Osteomyelitis

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Abstract

Emphysematous osteomyelitis is a rare condition characterized by intraosseous gas associated with significant morbidity and mortality. It has been observed to present in patients with underlying comorbidities, such as malignancy.

A 57-year-old male with a history of Acute Promyelocytic Leukemia, currently in remission after chemotherapy induction, presented to the hospital with worsening lower back and gluteal pain with difficulty ambulating for two weeks after bone marrow biopsy. The patient denied chills, sweats, nausea, vomiting, or rash. Upon evaluation, he was found febrile, with bilateral, fluctuant gluteal masses with sacral swelling and warmth. Computed tomography (CT) imaging showed bilateral gluteus maximus abscesses with air loculations, septic sacroiliitis, and iliac bone and sacrum osteomyelitis. The patient was started on empiric antibiotic therapy with Vancomycin and Cefepime, and the largest abscess was drained by interventional radiology. Blood and abscess cultures resulted positive for Methicillin-Sensitive Staphylococcus Aureus (MSSA), and antibiotics were tailored to Cefazolin monotherapy. Repeated blood cultures and imaging studies due to clinical deterioration of the patient showed persistent MSSA bacteremia and new CT findings showed persistence of undrainable abscesses and worsening of the septic sacroiliitis along with multiple air locules with erosions within the sacroiliac bones and joints, concerning for emphysematous osteomyelitis not amenable to surgical debridement. Due to image findings and progressive infection, Metronidazole was added for anaerobic coverage. Following treatment optimization, the patient improved clinically, blood cultures cleared, and imaging showed near resolution of abscesses. The patient was subsequently discharged to continue oral antibiotic therapy with Moxifloxacin, for coverage of MSSA and anaerobic organisms.

This case of a patient with progressive emphysematous osteomyelitis shows the importance of clinical correlation with laboratory and imaging tests. Staphylococcus aureus is the most common cause of osteomyelitis, however, rarely causes emphysematous complications. The principal organisms associated with emphysematous osteomyelitis are anaerobes, such as Fusobacterium Necrophorum, and Enterobacteriaceae. The former are fastidious and difficult to isolate. Although this patient's cultures did not grow any anaerobes, this does not exclude polymicrobial infection. Furthermore, it is crucial to take into account the patient's clinical presentation, along with the evidence associated with the pathology of concern, when optimizing therapy.

Clinical Vignettes Abstract #27

Abstract Title: Hypokalemia in Autoimmune Polyglandular Syndrome: A Case of Newfound Type I (Distal) Renal Tubular Acidosis

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Abstract

Autoimmune polyendocrinopathy-candidiasis-ectodermal dystrophy Type 1 (APECED) is a rare autosomal recessive disorder predisposing to early development of chronic mucosal candidiasis and progressive development of various endocrinopathies, such as Addison's disease, Primary Hypoparathyroidism, and Type 1 Diabetes (T1D). Few cases described in literature regarding renal involvement in this disorder, with most common manifestation being tubulo-interstitial nephritis, however, there is limited evidence regarding presentation of APECED with hypokalemia due to concomitant Type I Renal Tubular Acidosis (RTA).

Case of a 47-year-old female with past medical history of APECED Type 1 (consisting of Hypoparathyroidism, Adrenal insufficiency, and chronic mucocutaneous candidiasis), T1D without insulin supplementation, Hypothyroidism, and Nephrolithiasis, presenting to the emergency department complaining of bilateral upper and lower extremity weakness of one week in evolution, but worsening on day of admission. Denies any other constitutional symptoms. Strong positive first-degree relative history for autoimmune diseases. Physical examination: 2/5 strength in all four extremities, deep tendon reflexes grossly intact, and no gross sensory or motor deficit. Patient on oral steroid therapy for her Addison's, calcitriol supplementation for hypoparathyroidism, and potassium chloride supplementation since a prior hypokalemic episode 17 years ago. Laboratory workup results: Sodium: 140 mmol/L (N: 135-144 mmol/L), Potassium: 2.0 mmol/L (N: 3.4-4.5 mmol/L), Chloride: 110 mmol/L (93-107 mmol/L), ce ntral Bicarbonate: 18mmol/L (N: 23-31 mmol / L), Albumin: 3.4 g/dL (N: 3.5-5.2 g / dl), Anion Gap: 12 (N: 10-12), Magnesium: 2.6 mg/dL (N: 1.7-2.5 mg/dL, blood glucose (BG): 313 mg/dL (N: 70-110 mg/dL), TSH: 2.77 mIU/mL (N: 0.27-4.2 mIU/mL), Glycosylated Hemoglobin: 5.2% (N: 4.7-6.2%) and Anti-glutamic acid decarboxylase antibodies >25,000 U/mL (N: <5 U/mL). Adrenal Insufficiency was ruled out by laboratory findings, but she had normal anion gap metabolic acidosis (NAGMA) and hypokalemia. Urinalysis was negative for urinary tract infection but with PH: 7.0 (N : 4.5-8.0). Urine spots, measured to find the cause of her NAGMA, showed urine sodium: 92 mmol/L, urine potassium: 10 mmol/L, urine chloride: 90 mmol/L, and urine anion gap of 12 mEq/L, which is positive and suggests low urinary NH₄⁺, consistent with Type I (Distal) RTA as the main etiology. Patient started on IV potassium replacement, which increased potassium to 3.8 mmol/L, and improved acidotic state, with central bica rbonate of 29, and overall symptoms. Patient was discharged home with alkali therapy (Sodium citrate) for Type I (Distal) RTA.

RTA is an underrecognized condition that may be inherited or acquired. Diagnosis is difficult but can be verified with a thoughtful workup. RTA should be considered for any patient with otherwise unexplained hyperchloremic metabolic acidosis and may be the presenting manifestation of autoimmune diseases. Regular renal monitoring for any APECED patient should be performed. We present this case as evidence for the coexistence of several different immune-mediated diseases in the clinical context of APECED with an unusual concomitant Type I (Distal) RTA, where there is few documented evidence of association with this disorder.

Clinical Vignettes Abstract #28

Abstract Title: I need to dialysis, I can't breathe!

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Abstract

One of the advantages that science has brought to medicine is renal replacement therapy. With the evolution of medicine, different types of therapy have been developed; and many patients can choose the type that best fits with their lifestyle. However, risk and complications could affect the availability of renal replacement therapy for each patient.

This is the case of a 63 y/o female patient, with a past medical history of adult polycystic kidney disease (ADPKD), hypertension, hypothyroidism, and hypercholesterolemia that was started on peritoneal dialysis one month ago. Patient presented to emergency department with shortness of breath and fatigue for the past 3 weeks that was getting worse, causing fatigue and orthopnea. Physical examination was remarkable for decreased breath sounds on the right side, no jugular venous distention, no peripheral edema, and patent peritoneal dialysis tunneled catheter in the abdomen. Portable chest x-ray reported Diffuse right white lung with mass-effect towards the left. Chest ct scan without IV contrast reported large right-sided pleural fluid collection with near total collapse of the lung and polycystic kidney disease. Due to large amount pleural fluid, surgery services were consulted for chest tube placement. Pleural fluid was consistent with transudate fluid and elevated glucose level (69 mg/dl). She had relief after chest tube drainage and no recurrence of pleural effusion occurred after patient was switched to hemodialysis. Findings suggest a pleuroperitoneal leak, due to given history of ADPKD with pleural effusion that occurs early after peritoneal dialysis initiation, and no other clinical findings of fluid overload.

Pleuroperitoneal leak is a rare complication of peritoneal dialysis with an incidence of 1.6, where women are more affected. This condition may occur due to communications between the pleura and the peritoneum. In addition, patients with ADPKD are predisposed to develop this non-infectious complication due to increased hydrostatic pressure. However, many occasions pleural effusion resolve with overnight dwells. Our patient required chest tube placement for resolution of symptoms, and she could not be a candidate to continue with peritoneal dialysis. Although, if patient were aware of her predisposition and seek medical attention earlier conservative measures could be implanted and patient may continue with her current mode of therapy. This case serves for remainder about the importance of educating patient about how to identify therapy complications.

Clinical Vignettes Abstract #29

Abstract Title: It Is a No Named Cause of Superior Vena Cava Syndrome!

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Abstract

A condition that results in obstruction of blood flow through the superior vena cava (SVC) is termed superior vena cava syndrome. In cancer patients, most cases are due to malignant invasion or external compression by a tumor, but increasing etiologies are due to pacemaker wires and intravascular catheters used for hemodialysis, antibiotics, or chemotherapy. Our cases describe a patient with a late diagnosis of device-related SVC syndrome managed with cardiovascular surgery.

A 73-year-old patient with a past medical history of hypertension, diabetes mellitus type 2, coronary artery disease with stent placement, permanent pacemaker (PPM) placement due to sick sinus syndrome (13 years ago) came to the emergency department (ER) due to neck swelling. Two years ago, the patient was hospitalized for PPM battery replacement, which was performed uneventfully. Then one year ago, the patient was seen by the electrophysiologist for PPM replacement and pocket revision due to pain; the pacing wires reportedly had adequate thresholds. He had been well until approximately six months ago when he began experiencing exertional dyspnea, fatigue, and dizziness, aside from his progressive neck and upper extremities edema and dilated veins on the chest. Before the diagnosis of SVC syndrome was entertained at admission to our institution, he was seen by a nephrologist, endocrinologist, and pulmonary services for his symptoms. The patient underwent duplex scanning of the upper extremity and yielded negative for venous clots. A non-contrast chest CT scan failed to show cardiopulmonary abnormalities and showed multiple mediastinal and anterior chest wall collateral vessels. Thoracic venography was performed and demonstrated SVC syndrome and showed extensive involvement of the left-sided venous system, which suggested the PPM leads could have caused stenosis of the left innominate vein. The patient then underwent removal of pacemaker wires from innominate vein and relocation of the pacemaker to epicardial location, with also innominate vein to right atrium bypass with 10mm Dacron patch. The patient tolerated the procedure without complication with the subsequent resolution of his symptoms.

There has been an increase of 20 to 40 percent of SVC syndrome due to intravascular devices. If left untreated, the patient may develop cerebral, laryngeal edema, life-threatening symptoms, and sudden death. While SVC syndrome is rare, it is essential to understand and identify such conditions to assist in the early diagnosis and prognosis of such patients.

Reference

Rice TW, Rodriguez RM, Light RW. The superior vena cava syndrome: clinical characteristics and evolving etiology. *Medicine (Baltimore)* 2006; 85:37.

Clinical Vignettes Abstract #30

Abstract Title: Rare Complication Secondary to Treated Empyema

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Abstract

Pneumonia can lead to various known complications such as empyema and parapneumonic effusions. Hence, adequate therapy and follow up should be provided specially in patients with underlying comorbidities. If left untreated serious complications might arise. Empyema Necessitans is an infrequent complication of pleural empyema. It is characterized by the extension of pus through pleura into the chest wall leading to subcutaneous infection or abscess formation. The disease has a slow progression. Typically it develops within 4-8 weeks prior patient developing any complaints. Since the introduction of antibiotic therapy, reported cases have drastically decreased. Our report presents a patient that after adequate antimicrobial therapy progressed to develop this type of complication.

47 years old male with past medical history of hypertension, obstructive sleep apnea, bipolar disorder, diabetes mellitus type 2 and obesity that presented to our institution with complaints of productive cough of 1 week in evolution. Cough was described as pink colored with an amount of 5-6 tablespoons. Associated symptoms he reported fatigue, chest pain with inspiration, febrile episodes and anorexia. He had been hospitalized 2 months prior secondary to diagnosis of empyema. Chest tube was inserted without complications. Antibiotic therapy was provided and completed accordingly.

Due to ongoing symptoms and presentation of sepsis new imaging was requested. Chest CT reported a loculated right pleural effusion with interval development of a thick-walled rim-enhancing gas and fluid containing collection with extension into the right postero- lateral chest wall suggestive of Empyema Necessitans. Cultures were requested and he was quickly started on intravenous broad spectrum antibiotic therapy. He was referred to the cardiothoracic surgeon for emergent evaluation. Patient was scheduled for right extra- pleural decortication as well as drainage of empyema. Also, during intervention repair of diaphragmatic dehiscence was performed due to observed extension of the empyema into the abdomen. He tolerated well surgical intervention and improvement in leukocytosis was observed. In lieu of patient's recurrence of effusion and development of such complication Nocardia and Actinomyces sample were requested. Requested studies failed to identify any specific organism. In conjunction to antibiotic therapy and intervention improvement in clinical status was observed. He was discharged with instructions to follow up at outpatient clinic and complete antibiotic therapy.

Despite the rarity of the disease, it should be considered as a complication present after pneumonia infection. Hence, it is of great importance to recognize it at early stages in order to provide adequate treatment which involves specific antimicrobial therapy in combination to adequate drainage. Prompt diagnosis and management can decrease patient's morbidity and further potential complications to nearby structures.

Clinical Vignettes Abstract #31

Abstract Title: It is not unusual to say that some strong women are born with a soft heart

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Abstract

Non-Compaction Cardiomyopathy (NCCM) is part of a newly described myocardial disorders in the last 80 years, which comes from the failure of the left ventricle to complete embryogenesis and subsequently myocardial wall compaction from its early stages were the majority of the heart muscle is a sponge-like meshwork of interwoven myocardial fibers. This rare cardiomyopathy has been described with coupled complex congenital heart disorders and with involvement of the right ventricle as well but currently is described as uncommon isolated left ventricular cardiomyopathy. It has been given many names from "spongy myocardium" or "persistent embryonic myocardium", but more frequently known as "left ventricular non-compaction" or Non-compaction Cardiomyopathy (NCCM). The main characteristic features have been described on imaging studies as being composed of two layers, one outer compacted epicardial layer and an inner loose or non compacted layer with prominent trabeculations that communicate with the ventricular cavity.

We report a case of a 64-year-old female patient that presented to the emergency department reporting a two day history of chest pain associated with shortness of breath and dyspnea on exertion. Upon evaluation patient was found with typical chest pain and elevated serum troponin levels. No ST elevations nor other ischemic changes noted on EKG and due to her known past medical history and risk factors was provided guideline directed medical therapy for an acute coronary syndrome and admitted for further stratification. Cardiology services were consulted and surprisingly patient yield a peculiar ventricular septum with prominent hyper trabecular pattern concerning for a rare myocardial phenotype correlating with left ventricle non-compaction cardiomyopathy on 2D echocardiogram with preserved ventricular ejection and no obstruction of outlet tract. Subsequently she underwent left heart catheterization showing a severe obstructive lesion to the left circumflex graft and a successfully percutaneous coronary intervention without any complications was performed. Patient remained stable and was able to be discharged home with guided medical therapy for non ST segment elevation myocardial infarction and close monitoring with cardiologist as well including her immediate family.

This abnormality needs a high clinical suspicion for its diagnosis and often patients are been diagnosed by incidental findings, such as our case. This is imperative since they require a close monitoring of patient and close family member due to high genetic component. It is our goal to showcase this cardiomyopathy presentation since its prevalence on adults is around 1 percent and has been mostly described from echocardiography laboratory studies. It has high clinical relevance and several assessment limitations due to different diagnostic criteria and heterogenous population presentations, making its diagnosis even more challenging.

Clinical Vignettes Abstract #32

Abstract Title: Lemierre's Syndrome: More than Meets the Clot

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Abstract

Lemierre's syndrome is a rare and potentially deadly complication of bacterial infection with septic thrombophlebitis of the internal jugular vein. It occurs most commonly in healthy teenagers and young adults, and is frequently associated with the anaerobic bacterium, *Fusobacterium necrophorum*. The infection originates in the throat and spreads via soft tissue planes causing septic thrombophlebitis of the tonsillar vein and internal jugular vein. The infrequency of this condition makes it imperative that we review this pathology and expand our knowledge base.

A 23-year-old male presented to the emergency department (ED), with a complaint of severe pain over the left neck with associated swelling and erythema that started one week ago. Two weeks ago he had developed a sore throat, ear pain, odynophagia, shaking chills, and fevers. The patient took PO Augmentin for five days, but the symptoms did not improve. At another institution ED he was found with thrombophlebitis of the left internal jugular vein and was discharged with Amoxicillin-Clavulanate and Apixaban. The patient returned to the ED due to worsening symptoms and head/neck CT showed an abscess measuring approximately 10 cm long, 1.7 cm AP and 2.7 cm lateral to the carotid space and medial to the sternocleidomastoid muscle. The findings represent complicated thrombophlebitis with resultant abscess formation. The patient was intervened by ENT with an awake tracheostomy with incision and drainage of deep neck space to protect his airway. The patient was started on empiric Vancomycin, Ceftriaxone, and Flagyl while we waited for cultures to confirm suspicions of *Fusobacterium Necrophorum* which is one of the most common causes of Lemierre's Syndrome. Chest X- Ray was negative for septic emboli, and 3 sets of blood cultures showed no growth after 5 days. Cultures came back positive for *Fusobacterium* spp and the patient's clinical picture improved. The patient completed 14 days of Ceftriaxone and Flagyl and was then transitioned to 14 additional days of Clindamycin PO.

This case illustrates the possibility of Lemiere's disease in our classic thrombus cases and hopes to decrease the delay in treatment until the patient's symptoms worsen, warranting a more extensive work-up or complications in future cases. Current literature guided our therapy which includes antibiotics therapy tailored according to culture and susceptibility data when available and antibiotic duration for at least four weeks, including at least two weeks of intravenous therapy. Anticoagulants were not ordered, since literature suggested not treating most patients with this presentation with anticoagulation (Grade 2C recommendation). *Fusobacterium* spp. have had increasing resistance rates to Amoxicillin-Clavulanate and Ampicillin-Sulbactam which are common antibiotics used in oropharyngeal infections. Although Lemierre's disease is fairly rare, it is imperative we increase awareness of this syndrome to improve patient mortality and morbidity.

Clinical Vignettes Abstract #33

Abstract Title: Methadone: "Twisting Of The Points"

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Abstract

The prolonged QT interval is both widely seen and associated with the potentially deadly rhythm, Torsades de Pointes (TdP). While it can occur spontaneously in the congenital form, some drugs have been involved in prolonging the QT interval as it is Methadone, a prevalent drug in the management of opioid dependence. Unfortunately, along with its popularity, Methadone can cause prolongation of the QT interval and an increased risk of ventricular arrhythmia.

This is the case of 53 y/o M patient, an active IV drug user who present to the emergency department complaining of bilateral lower extremities ulcer stage 2. The patient was admitted for treatment with IV antibiotics and wound care. Two days after admission, the patient present with a sudden collapse witness by nurse staff. Immediately ACLS was started, and the cardiac monitor shows TdP. ECG was done and resulted in QT prolongation more significant than 460msec. Electrolytes were within normal limits. Except for Methadone, no other medication given during the admission is known to cause QT prolongation. After Methadone was discontinued, serial ECG daily shows progressive shorten QT. No new episode of TdP was reported and was successfully extubated.

Finally, while Methadone has proven efficacy in reducing the use of nonprescription opioids and alleviating pain, it has the potential for serious adverse effects. The case presented here supports previous literature associating methadone treatment with a prolonged QT interval and progression to torsade de pointes.

Clinical Vignettes Abstract #34

Abstract Title: Milkshake heart: A Case of Primary Chylopericardium

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Abstract

Chylopericardium is a rare condition characterized by accumulation of triglyceride rich fluid in the pericardial cavity. Most common causes of secondary chylopericardium are malignancy, trauma, cardiac surgery, congenital lymphangiomatosis, and radiotherapy. Primary or idiopathic chylopericardium is less common and is a diagnosis of exclusion. Diagnosis is made with fluid analysis showing triglyceride (TG) levels over 500mg/dL. Management depends on etiology and symptomatology but expands from low TG diet to pericardiocentesis, pericardial window, pericardio-peritoneal shunt, chemical pericardiodesis and ligation of thoracic duct.

This is the case of a 43 year-old female patient with past medical history of hypothyroidism and right thigh sarcoma status post limb sparing surgery with chemotherapy and radiotherapy, who was hospitalized due to pericardial effusion found on surveillance tests. Chest CT scan showed large pericardial effusion without signs of tamponade. Patient was treated with a pericardial window which showed milky-white fluid. A pericardial biopsy showed dense fibroconnective and adipose tissue with mesothelial lining cells without significant histopathologic findings. Chylopericardium was diagnosed after fluid analysis. Patient was discharged, but six days later, presented to ED with dyspnea and chest pain. Now, Chest CT scan presents with large pericardial effusion and bilateral pleural effusions requiring thoracotomy, with subtotal pericardiectomy and ligation of the thoracic duct with mediastinal chest tube placement for drainage. Also, bilateral thoracentesis was done showing chylothorax. After eleven days due to significant clinical improvement the chest tube was removed and she was discharged without further complications.

Primary chylopericardium is a benign disease; however, in some cases it may be a fatal disorder. For this patient, initial etiology was suspected to be malignancy due to her medical history. Further evaluation led to the diagnosis of idiopathic primary chylopericardium for which ultimately ligation of the thoracic duct was needed. Conservative treatment (pericardiocentesis, pericardiostomy, low TG diet) is first line, but surgery (ligation of thoracic duct, pericardial window) is invariably curative for idiopathic chylopericardium. It is important to rule out possible etiologies even when high grade suspicion of a certain etiology is present.

Clinical Vignettes Abstract #35

Abstract Title: Miller-Fisher syndrome and Chronic Lymphocytic Leukemia - Associated paraneoplastic syndrome with unique therapeutic strategies

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Abstract

Miller-Fisher Syndrome is an uncommon acute immune-mediated inflammatory disease of the peripheral nervous system characterized by axonal and sensory polyneuropathy. A triad of ophthalmoplegia, ataxia and areflexia may be seen and it is considered a variant of Guillain-Barre Syndrome (GBS). In rare occasions, a hematological paraneoplastic syndrome such as Chronic Lymphocytic Leukemia (CLL) may be the precipitating condition.

We present a case of a 50-year-old man who came to our Emergency Department complaining of numbness of face, tongue and mouth, associated with dysgeusia, imbalance and ataxia of 5 days of progression. He visited previously other emergency departments and was treated with analgesics without patient admission. In view of the worsening of symptoms, the patient was admitted to our institution with unilateral ptosis, left 7th cranial nerve palsy, decreased handgrip, slurred speech and ataxia. Imaging studies of Central Nervous System (CNS) did not reveal acute abnormalities. Neurology service was consulted and lumbar puncture showed albuminocytologic dissociation consistent with GBS. Patient was treated with IV immune globulin (IVIG) with improvement of his neurological function but with persistent motor deficit. The patient presented persistent lymphocytosis since admission, which raised concern for an ongoing lymphoproliferative neoplasm. His peripheral flow cytometry and cytogenetics revealed Chronic Lymphocytic Leukemia (CLL) with 13q-. Given that CLL may be associated with autoimmune disorders, the patient was treated for CLL with tyrosine kinase inhibitor Acalabrutinib. After the first four weeks of therapy, the patient felt improvement in his ambulation and slurred speech improved. Obinotuzumab should be starting within the next 1-2 weeks and neurological response will be monitored closely.

Physician awareness of atypical presentation of Miller-Fisher Syndrome is important given that treatment should not be delayed. After getting a thorough clinical history, the patient with several emergency department visits was promptly diagnosed with non-commonly seen Miller-Fisher Syndrome due to CLL, properly treated with a good prognosis. Atypical neurological presentation represents a challenge to clinicians, but when related to a malignancy, a prompt and accurate diagnosis is critical in changing long-term outcomes. The association of diagnosis of Miller-Fisher Syndrome concomitant with CLL could vary in onset of presentation, both at same time or different, but an accurate diagnosis could be the difference in positive evolution of symptoms and prognosis.

Clinical Vignettes Abstract #36

Abstract Title: Neuro-ophthalmic presentation of Granulomatosis with Polyangiitis with superimposed infection: case of a challenging diagnosis.

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Abstract

Granulomatosis with polyangiitis (GPA), formerly known as Wegener's granulomatosis (WG), is a rare autoimmune disease characterized by granulomatous inflammation, tissue necrosis, and vasculitis in small/medium-sized vessels. Respiratory system abnormalities, systemic vasculitis, and necrotizing glomerulonephritis are the characteristic components of the disease triad, but limited presentation with respiratory system involvement could be presented as well. Due to difficulties establishing the diagnosis base on presentation, diagnostic criteria include clinical, serological, and histopathological findings.

Case of a 61-year-old-male with past medical history of Hypertension and Hypothyroidism, who arrived at ED with pain and progressive decrease of vision of right eye, noticed 3 days before arriving ED. Patient reported presence of epistaxis for the last 3 years and 1 year history of anosmia. Physical examination remarkable for absence of light perception, positive afferent pupillary defect and complete ophthalmoplegia of the right eye; hypoesthesia of the right trigeminal nerve (V1) also noted.

Initial blood work up grossly unremarkable, except for elevated CRP. MRI (orbital and Brain) with findings suggestive of mucosal thickening, more severe along the bilateral posterior ethmoid and bilateral sphenoid sinuses, abnormal signal intensity of the surrounding bone marrow with findings suggestive of either bacterial sinusitis with inspissated material or fungal infection. Empiric broad spectrum antibiotic and anti-fungal therapy was started with partial improvement of symptoms. ENT performed nasal cavity biopsy and cultures revealed growth of MRSE and severe chronic lymphoplasmacytic infiltrate with superimposed acute inflammation and giant cell reaction. Initial differential diagnosis included Bacterial vs invasive fungal rhinosinusitis, granulomatous disease, or malignancy with secondary right orbital apex syndrome. Serum Cryptococcal-Ag, Aspergillus-Ag, 1-3-B-D-glucan assay, and Histoplasma-Ag resulted negative. Rheumatology work up remarkable for positive anti-PR3 antibody and negative anti-MPO, Cryoglobulins; C3 and C4 complement were normal. Rheumatology service was consulted, who diagnosed our patient with Granulomatosis with Polyangiitis without renal involvement and superimposed MRSE infection was established. Antibiotic therapy was optimized and steroid therapy with rituximab was started. Adequate improvement of ophthalmic abnormalities except for vision of the right eye was achieved. Patient was successfully discharge home with further follow up by Rheumatology service.

Our case is an example of an uncommon presentation of GPA with concomitant superimposed infection, which confers a challenge upon deciding when is safe to start steroid and immunosuppressive therapy. This can potentially add morbidity and lead to detrimental outcomes. Early diagnosis and multi-disciplinary therapeutic approach among Physicians are essential parts to reduce potential complications and progression of the disease. Since imaging findings are not always specific for the diagnosis of GPA, biopsy and specific rheumatologic work up is essential to confirm the diagnosis when disease is suspected. Despite recent advances, more research is necessary to prevent the high rates of mortality, permanent sequels, and treatment side effects.

Clinical Vignettes Abstract #37

Abstract Title: Not Your Common Pressure Ulcers: Thrombotic Vasculopathy in COVID-19 Patient

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Abstract

Coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has a large variety of clinical presentations, not limited to respiratory manifestations. Around the world, case series have identified many potential dermatologic manifestations during COVID-19.

We present the case of a 90-year-old man with no known past medical history who was found face down on the floor by his son and transferred to our institution due to a large intracerebral hemorrhage and subdural hemorrhage. His son did not recall any viral symptoms in the preceding days. In the emergency room he was intubated for airway protection due to depressed neurologic status. Initial chest x-rays were found without an obvious pneumonic process. Neurosurgery service determined that no aggressive neurosurgical procedures were indicated. Patient was found to be incidentally SAR-CoV-2 PCR positive, for which our Infectious Disease service was consulted. On physical exam, patient was found to have multiple skin lesions including a left anterior chest black eschar with tender surrounding non-blanching erythema. Similar lesions were found on his face, abdomen, penis, and bilateral knees. Dermatology service performed a punch biopsy as the working differential were lesions due to hypercoagulable state versus ecthyma gangrenosum. A chest CT was ordered which revealed bilateral acute thromboembolism of the pulmonary arteries. An IVC filter was placed, given his recent intracerebral hemorrhage; risk and benefits of anticoagulant therapy were discussed on multiple occasions throughout hospitalization. D-Dimers were found markedly elevated along with elevated inflammatory markers and pro-calcitonin levels. He was started on Decadron 6mg IV daily, due to new bilateral infiltrates and oxygen dependence, and empiric antibiotics for suspected hospital acquired pneumonia Remdesivir was held as patient was already on mechanical ventilator. Biopsy of skin lesions revealed thrombosis of small and medium size vascular channels, with necrosis and ulceration consistent with thrombotic vasculopathy. Thrombotic workup was essentially unremarkable including protein C, protein S, anti-phospholipid antibodies, factor V leiden, plasminogen activator/inhibitor, antithrombin III level, homocysteine levels, factor VIII, and cryoglobulin levels. Patient was then successfully extubated, and oxygen was being weaned off until he developed sudden deterioration, refractory shock, respiratory failure, and asystole. Do not resuscitate advanced directives were respected and patient passed away after one month of being admitted.

As the pandemic courses on, we are almost reaching two years of constantly evolving data. Common clinical presentations are recognized rapidly, however many atypical presentations have been documented. These include a plethora of dermatologic manifestations such as morbilliform rashes; urticaria; pernio-like, acral lesions ("COVID toes"); livedo-like, vascular lesions, including thrombotic vasculopathies; vesicular, varicella-like eruptions, and even herpes zoster. As an emerging pathogen, during times of high prevalence high clinical suspicion should be maintained for new unique clinical manifestations of disease

Clinical Vignettes Abstract #38

Abstract Title: The Room is Not Big Enough for the Three of Us: CMV, HSV type 1, and PCP Co-Infection in an Immunocompromised Patient.

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Abstract

Cytomegalovirus (CMV) pneumonitis is normally seen in post-solid organ transplant patients. Its clinical presentation is more severe in post-lung transplant patients. However, the incidence of CMV Pneumonitis is related to the intensity of the immunosuppressive therapy. Furthermore, Cytomegalovirus, Pneumocystis Jirovecii (PCP) Pneumonia, and Aspergillus infection may, rarely, coexist.

We present the case of a 68-year-old diabetic woman with a 2 year history of diffuse large B cell lymphoma. She completed 8 cycles of R-CHOP; with subsequent change to Rituxan, Gemcitabine, and Oxaliplatin. Just before her third cycle she developed erosions on her lips and tongue that did not improve with oral fluconazole. A month later she developed shortness of breath, dysuria, dyspnea on exertion, and worsening oral erosions with crusting and new deep tongue ulcer for which she was taken to the emergency room. She was found to be hypoxic requiring intubation. A thoracic CT was remarkable for extensive ground-glass opacities, with crazy paving seen throughout both lungs. Patient was immediately transferred to the Intensive Care Unit. She was initiated on broad-spectrum antibiotics, including Vancomycin, due to mucositis and pneumonia, Meropenem for gram-negative bacteremia, TMP/SMX and adjunctive corticosteroids due to concern of PCP pneumonia, Caspofungin, and Acyclovir due to characteristic lip and tongue lesions. Broncho-alveolar lavage was performed for diagnostic purposes which revealed alveolar hemorrhage. Additional findings included viral cytopathic changes suggestive of CMV which were confirmed by immunohistochemistry (IHC), Grocott and PAS staining demonstrated PCP in multiple sites of both lungs with one cell showing HSV type 1 by IHC. Serum CMV DNA levels were more than 2 million IU/mL. Bacterial and Fungal cultures and work up were negative. Therapy was tailored to Ganciclovir and TMP/SMX. Subsequently Intravenous Immunoglobulin salvage therapy was added due failure to improve and concomitant hypogammaglobulinemia. Unfortunately, our patient continued to have refractory septic shock with multi-organ failure and passed away after a three-week hospitalization.

In immunocompromised individuals early imaging studies and establishing a microbiologic diagnosis is of utmost importance. Frequently, biopsies and/or bronchoscopy are necessary to establish a definite diagnosis. Empiric antibiotics based upon available data should be started as soon as possible and tailored as data emerges. Concomitant infectious processes can occur. These may include dual or even triple infection with PCP, CMV, and HSV, such as in our patient. However, laboratory assay results must be interpreted cautiously as CMV in bronchoalveolar lavage fluid do not necessarily represent invasive disease.

Clinical Vignettes Abstract #39

Abstract Title: Not your typical bruise: Immune Thrombocytopenia following the Moderna COVID-19 vaccine

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Abstract

The coronavirus disease 2019 is caused by the recently discovered severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It is a contagious disease that led to a pandemic which started in 2019 and is still ongoing. By late 2020, the first vaccines were approved for emergency use, and with the development of vaccines there were increased reports of adverse effects. There is scant documentation in the medical literature of cases of Immune Thrombocytopenia following the administration of vaccines produced by Moderna and Pfizer-BioNTech.

This is the case of a 93-year-old Hispanic man with medical history of Hypertension and Coronary Artery Disease who developed a hematoma on his forearm three days after his first dose of the Moderna vaccine. He visited his primary physician where laboratories showed a platelet count of 12,000. Patient had no previous history of hematologic condition, no previous abnormal platelet count, and complete blood count one month before vaccination was within the normal range. Physical examination at the emergency department revealed a hematoma on right forearm measuring 16cm x 8cm, without lymphadenopathy, hepatomegaly, or splenomegaly. Hemoglobin level and white blood cells were within the normal limits and peripheral smear did not report any morphologic abnormality. Renal function, liver enzymes, and coagulation panel were within the normal range. Platelet antibodies, Heparin-induced platelet antibodies, and platelet factor 4 antibodies were not detected in serum. Fibrinogen and LDH were within normal limits. D-dimer was elevated at 2.4ug/mL. ANA test and HIV test were negative, and Hepatitis panel was noncontributory. TSH, Vitamin B12, and Folate were all at normal ranges. Tests for COVID-19, including PCR and antibodies, were also negative. Presumptive diagnosis of Immune Thrombocytopenia was made, and patient was initially treated with one dose of Prednisone 60mg PO. He then received Immune Globulin 20gm IV and Methylprednisolone 60mg IV Q8hrs. Methylprednisolone lasted for three days until he was transitioned to oral Prednisone 40mg daily on the fourth day of admission. After the first day of treatment with IVIG and Methylprednisolone, patient's platelets increased to 72,000 and after three days on treatment with IV steroids, his platelet count normalized to 209,000. Patient was discharged with a platelet count of 318,000 on a tapering dose of Prednisone.

This case highlights the matter of a patient who presented with Vaccine-Induced Immune Thrombocytopenia and was successfully treated with first line treatment, corticosteroids and IVIG. Immune Thrombocytopenia following the administration of the COVID-19 vaccine is still reported as rare side effect. Incidence has been reported to be less than one per million persons vaccinated and this fact should not limit the use of life-saving vaccines. The mechanism of action of Vaccine-Induced Immune Thrombocytopenia appears to be immune-mediated platelet destruction, but further studies are needed.

Clinical Vignettes Abstract #40

Abstract Title: Painless Giant Cell Arteritis: A Rare Phenomenon

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Abstract

Giant Cell Arteritis (GCA), also known as Horton's Disease, is a large and medium vessel vasculitis whose most feared complication is vision loss. Around 70% of patients with GCA have visual involvement, which prompts emergent medical intervention.

This is the case of a 61-year-old female with a medical history of Sjogren's Syndrome, hypothyroidism, diabetes mellitus, hypertension, protein C/S deficiency on oral anticoagulation, and previous ischemic CVA who presented to the emergency department with painless, acute bilateral vision loss. Patient stated that she had been intermittently seeing what she described as flashes of light and floaters for the preceding two weeks until the morning of the presentation, when everything went dark. Patient reported visiting an Ophthalmologist who referred her to ER concerned for possible CVA vs. GCA. Patient denied trauma, headache, diplopia, focal weakness, dizziness, sensory or speech deficits, jaw claudication, shoulder or pelvic pain, temporal tenderness, or morning stiffness. Upon examination, her blood pressure was 127/70 with a regular pulse of 70 beats/minutes and a temperature of 36.6 Celsius. Pupils are equal in size, fixed, and non-reactive to light without scleral injection, and there was no blink to visual threat. Patient was evaluated by Ophthalmology Service, which found no evidence of papilledema, retinal detachment, or retinal artery occlusion an unremarkable examination when GCA is suspected. Laboratories were remarkable for ESR at 115 mm/hr. Brain CT was unremarkable for lesions that could explain symptoms. MRA performed was without evidence of flow-limiting intracranial arterial stenosis or occlusion. Orbit MRI is remarkable for bilateral optic neuritis. Given these findings, the patient was admitted to Medicine Ward with a presumptive diagnosis of Giant Cell Arteritis. Autoimmune panel ANA and markers for Sjogren's Syndrome were positive. The patient was started on intravenous high-dose corticosteroid therapy with Methylprednisolone 1G daily. Temporal artery biopsy was performed with evidence of abnormalities such as fracture of an elastic membrane with lymphoid cells and macrophages at the blood vessel wall. Given the patient's age, elevated inflammatory markers, and biopsy, the patient was diagnosed with Giant Cell Arteritis. Unfortunately, the patient did not recover her eyesight. This patient had an atypical presentation of GCA due to a lack of accompanying symptoms such as headache, temporal tenderness, or jaw claudication which have been extensively described in GCA. Cases of patients who presented with visual and ocular signs of GCA without any systemic symptoms have been reported in the literature. This phenomenon has been named occult giant cell arteritis. Around 21.2% of patients with GCA do not have systemic symptoms. Early diagnosis of GCA is critical in preventing blindness. In patients above the age of 50 with new-onset visual symptoms and elevated inflammatory markers elevated level of suspicion for GCA should be present.

Clinical Vignettes Abstract #41

Abstract Title: Persistent Hiccups: A Rare Case of Acute Colitis related to COVID-19

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Abstract:

Most COVID-19 infections present with respiratory symptoms yet gastrointestinal symptoms have been increasingly reported prior to the onset or even in complete absence of respiratory symptoms. Common symptoms noted include loss of appetite, nausea, vomiting, abdominal pain and diarrhea. There are few cases of COVID-19 related colitis in the current literature. We present a rare case of COVID-19 colitis confirmed by CT scan, with the atypical presentation of persistent hiccups.

A 57 year old male with a PMHx of HTN, Parkinson's disease, stroke and localized colorectal adenocarcinoma presents to our institution with persistent hiccups and hypotension. The patient was started on chemotherapy (Capecitabine + Oxaliplatin) 3 weeks prior. In the last 7 days, he had GERD, nausea, anorexia, mild abdominal discomfort and diarrhea. Initial laboratories recorded mild microcytic anemia, WBC WNL and an AKI. He was started on IV hydration, and an infectious work-up was sent. Results were negative for C. difficile toxin, rotavirus, stool fat, stool leukocytes, ova/parasites, and negative growth in cultures. Hypotension resolved after 24 hours. Despite treatment, he continued with hiccups, abdominal pain and PO intolerance. Unfortunately, the patient suffered respiratory failure secondary to aspiration due to hiccups; and was placed on MV for 24 hours. At this point, COVID-19 PCR pharyngeal swab came back positive. Abdominopelvic CT scan was performed due to persistent symptoms, demonstrating edematous ascending colon and distal ileum consistent with colitis. Further work-up revealed normal PH and lactic acid levels. He was placed on NPO and IV antibiotics. After 14 days of hospitalization, the patient was discharged.

Both gastrointestinal (GI) symptoms and hiccups have been reported as atypical presentations of COVID-19 infection previously, but not concomitantly and even separately, very rarely. Physicians must be suspicious of GI symptoms, with persistent hiccups, in the pandemic in order to diagnose COVID-19 infection and avoid further GI complications including ischemic, ileus and perforation; or the onset of severe respiratory complications.

Clinical Vignettes Abstract #42

Abstract Title: Race Against Time and Drug Resistance: Recalcitrant Tuberculosis; A Case Report

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Abstract

Tuberculosis (TB) is one of the leading causes of morbidity and mortality worldwide. It has emerged in epidemics throughout sub-Saharan Africa, with multiple variants being extensively drug-resistant (XDR-TB). XDR-TB is defined as resistance to isoniazid, rifampin, fluoroquinolones, and an injectable drug. First reported in 2006 in a South African epidemic and now widespread, XDR-TB represents a global health threat. The reason being that drug-resistant tuberculosis treatment is less potent and less tolerable than first-line therapies, and almost one in three TB patients have a drug-resistant form of the disease. Here, we present a case of resistant TB with low-risk factors.

A 56-year-old inmate with 20 pack-year smoking history and no other medical conditions had sudden pain on the left side of the chest, associated with coughing and bloody sputum for three days before ED visit. Upon his arrival, he had normal oxygen saturation and vital signs. Physical examination was highlighted by decreased lung sounds on the left side of the chest with associated ipsilateral superior field crackles. Labs were remarkable for an elevated ESR. Chest CT showed a left-sided pneumothorax (PTX) with a consolidation of the left upper lobe associated with cavitation. Histoplasma, Aspergillus antigen, HIV, and B-D glucan were negative, but the tuberculin skin test was positive. A thoracostomy tube was placed with resolution of the PTX. The acid-fast bacilli smear was positive, and nucleic acid amplification for susceptibility to antituberculosis drugs showed 100% resistance to rifampin (*rpoB* locus), isoniazid (*katG* locus), ethambutol (*emb B* locus), and pyrazinamide (locus *pnc A*). Isolates had additional mutations in 80% of *GyrA* and 91% of the *rrs* locus that confers resistance to fluoroquinolones and amikacin, respectively; thus, meeting the criteria for XDR-TB. Due to pan-resistance, shortages of drugs, and resources, the patient began an individualized treatment with intravenous ethionamide, clofazimine, linezolid, and amikacin, which significantly prolonged his hospital stay but was able to obtain negative AFBs after nine months.

This case shows how a patient without recent travel, exposure/previous treatment, or a history of immunosuppression acquired an extensively resistant variant form of TB. The only risk factor identified was being confined in the last four months. There is concern that the treatment received may be suboptimal and that the patient should be treated with pretomanid, bedaquiline, and linezolid (BPaL regimen). However, many factors interfere with its availability, such as social status, resources, and attainability of medications. The preference for this approach is due to the recent Nix-TB trial, which demonstrated 90% culture-negative survival six months after the end of treatment. Even as an ancient disease, resistance mechanisms pose a public health threat relevant today, warranting effective treatment options to avoid further resistance development.

Clinical Vignettes Abstract #43

Abstract Title: Ranolazine: A New Modality For Electrical Storm

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Abstract

Electrical storm refers to cardiac electrical instability characterized by multiple ventricular tachycardias (VT storm) or ventricular fibrillation episodes within 24 hours. There are limited options in patients with anti-arrhythmic drug-refractory VT. Ranolazine is a drug that exerts anti-anginal and anti-ischemic effects. In this case, Ranolazine appears to have beneficial roles in ventricular arrhythmias.

This is the case of a 57 y/o male with PMHx of arterial hypertension, DM type II, MI x4 (last 2020) who came to the ED complaining of dizziness, SOB, and intermittent chest pain that started a month ago. Described it as pressure-like, 15 minutes duration, worsened by exertion, improved by rest, localized, 6/10 on a scale of severity. Upon admission, EKG and troponins were negative. Resting myocardial perfusion scan and cardiac PET/CT shows a large area of a nonviable myocardial scar with perfusion defect corresponding to LAD with 33% LV mass. Finally, cardiac catheterization resulted in three-vessel disease and underwent CABGx3. Status post-surgery day #7, the patient presents with asymptomatic sustained VT resulting in a storm. He was initially treated with cardioversion according to ACLS protocol with a temporary solution. Ranolazine was given after his third episode with complete resolution of the VT storm.

Electrical storm is generally associated with poor outcomes; most studies report a high association between the electrical storm and cardiovascular mortality. Thus, although Ranolazine helps treat refractory angina, it should also be considered anti-arrhythmic therapy beyond anti-ischemic properties because it was as effective as other anti-arrhythmic drugs (sotalol, lidocaine) to reduce reperfusion-induced ventricular arrhythmias.

Clinical Vignettes Abstract #45

Abstract Title: 72 Years Without a Lung or a Diagnosis: A Case of Right Lung Hypoplasia in an Elderly Patient

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Abstract

The majority of patients with congenital diseases are identified either at birth or in early life. Of these, cardiothoracic malformations are rarely diagnosed in advanced age due to high mortality or symptomatology early on. We present a case of asymptomatic right lung hypoplasia with complete deviation of the heart and mediastinal structures towards the right, that we diagnosed at age 72. Our patient is a 72 years old Male without prior medical conditions that presented to the emergency department with abdominal pain described as belt-like. Only associated symptom was a subjective fever. Social history is significant for 50 pack years of smoking. Notably he lives alone in a rural area of Puerto Rico and has poor medical follow up. On a physical exam he had a port wine stain on the right neck, heart sounds were absent on the left hemithorax, breath sounds absent on the right hemithorax, and presence of bilateral gynecomastia. Labs were notable for leukocytosis and transaminitis. ABGs demonstrated hypercapnia and hypoxemia consistent with his history of chronic smoking. Abdominal CT scan for evaluation of pain showed no acute abdominal pathology but revealed an incidental right cavitory lesion in the thorax with absence of right lung parenchyma. Portable CXR showed complete opacification of right hemithorax and absence of heart in natural position due to left lung hyperinflation. Further evaluation with a Chest CT scan showed hyperplasia of the left lung, complete shift of heart and mediastinal structures to the right beyond the midline, a 7x5x6cm cavity with air fluid levels and absence of right lung parenchyma. The patient was admitted for workup of cavitory lesion of the right lung. Bronchoscopy was performed and demonstrated: right tracheal deviation, purulent secretions in right bronchi and segments of the right lung which the bronchoscope would not pass. Cultures, cytology and biopsy were obtained from the bronchoscopy. Malignancy, tuberculosis, aspergillus and fungal infections were all ruled out. 3D reconstruction of the lung was able to demonstrate rudimentary right bronchus segments and a narrow airway leading towards the cavity; it also aided in characterizing the cavity as cystic. The patient responded well to antibiotic therapy with resolution of leukocytosis and abdominal pain. This case demonstrates how severe anatomical distortion can present with no physical symptoms and go undiagnosed for years. The amount of cases of right lung hypoplasia diagnosed in adults is limited. Our patients' atypical presentation and use of 3D reconstruction to aid in diagnosis provides new insight to the presentation and prognosis in patients with right lung hypoplasia.

Clinical Vignettes Abstract #46

Abstract Title: Severe Multifocal Pneumonia or Acute Myeloid Leukemia? Rapid Recognition Saves Lives!

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Abstract:

Regarded as the most common type of leukemia in adults, Acute Myeloid Leukemia (AML) is a rare condition accounting for 1% of cancer-related deaths in the United States. Presenting with a wide array of clinical manifestations, from completely asymptomatic to life-threatening hyper-leukocytosis, pulmonary involvement as an initial manifestation is uncommon. Mostly observed in severe late-stage disease, is often misdiagnosed as an acute infectious process of which treatment delay may result with unintended catastrophic consequences.

We present the case of a 31-year-old Hispanic female with no pertinent past medical history, who presented to her primary care physician due to constant neck pain of three weeks duration, and new-onset mild shortness of breath. Physical examination was remarkable for bruises in the neck and bilateral lower extremities, and chest auscultation with mild rhonchi in the lower bases. Denied recent trauma, fever, or chills, only referred constant dry cough. Labs revealed leukocytosis of 76.5K with 61% peripheral blasts, hemoglobin 10 g/dL, platelets 84K, and lactate dehydrogenase 730, with subsequent peripheral flow cytometry resulting with AML. Patient was started on Hydroxyurea and transferred to a Leukemia ward for further management.

Upon arrival, Bone Marrow (BM) biopsy was performed to confirm diagnosis, however patient was noticed with progressive respiratory discomfort. Chest X-Ray revealed right mid-lung and basilar opacities, for which blood, sputum, and urine cultures were taken and was promptly started on broad spectrum antibiotics with respiratory therapies. Two days later, with no identifiable organism growth reported in cultures, patient developed fever and chills with tachypnea and peripheral desaturation, requiring venturi mask at 50% oxygen concentration. Chest CT revealed increased interstitial markings with patchy ground-glass opacities and confluent densities at the lung bases, suggestive of multifocal pneumonia. Infectious Disease and Pneumology services were consulted recommending escalation of antibiotic therapy, but possibility of leukemic lung infiltration was entertained. BM results confirmed AML with t(11;19)(q23;p13.3), BRAF "V600E", and NRAS "Q61K" with marrow described as marked by hypercellular with 90% blasts. Upon confirmation, in view of further clinical deterioration despite optimal antibiotic therapy, requiring bi-level positive pressure ventilation, leukemic lung involvement was strongly suspected. With central venous catheter in place, was started on "7+3" induction therapy consisting of Cytarabine & Idarubicin. After 3 weeks, patient responded remarkably with no further need for oxygen supplementation, and chest CT revealing complete resolution of infiltrates.

This case highlights the importance of recognizing uncommon clinical manifestations of AML that lead to life saving treatment. Leukemic lung involvement should be suspected in patients presenting with respiratory symptoms and a peripheral blast count > 40%, after an aggressive diagnostic approach to exclude infectious etiologies has been performed.

Clinical Vignettes Abstract #47

Abstract Title: So high Blood Pressure? Adrenals could be the hidden gem

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Abstract

Resistant hypertension has been defined as a condition where blood pressure levels remain uncontrolled despite the use of at least three drugs or if the control happens with four or more drugs. As per literature, 20% of cases of resistant hypertension are due to secondary causes and among these, primary aldosteronism (PA) is the most common. Besides uncontrolled blood pressure, patient with PA showed dysregulation of serum electrolyte levels and experience a higher rate of cardiovascular complications such as cardiac hypertrophy and fibrosis compared with essential hypertensives. Despite this, the literature showed that detection of PA in primary care is suboptimal.

This is the case of 71 years old male with past medical history of type II diabetes mellitus (T2DM), papillary thyroid cancer on remission after thyroidectomy, hypothyroidism, dyslipidemia and hypertension. Patient was evaluated by Endocrinology service due to metabolic diseases, and during evaluation noted with uncontrolled blood pressure despite reports of being compliant with anti-hypertensive therapy including Hydrochlorothiazide (HCTZ) and Amlodipine. As relevant history, hypertension was initially diagnosed at age of 67 years old and started on Lisinopril which was discontinued due to adverse effect and transitioned to Losartan with HCTZ and Amlodipine. Losartan caused rhinitis; thus, it was also discontinued. Besides uncontrolled hypertension, laboratories were remarkable for spontaneous hypokalemia and metabolic alkalosis. In view of these findings HCTZ and amlodipine were discontinued, and Diltiazem was started. Secondary causes of hypertension such as obstructive sleep apnea (OSA) and hyperaldosteronism were suspected, thus polysomnography and serum plasma aldosterone concentration (PAC) and plasma renin activity (PRA) for ratio were requested. Polysomnography was remarkable for severe OSA. PAC/PRA ratio was 111, which confirmed the diagnosis of primary hyperaldosteronism. Abdominal CT with adrenal protocol was requested and showed a left adrenal adenoma of 2 cm with 1.17 HU. In view of these findings, patient started on Eplerenone for hyperaldosteronism and adrenal venous sampling requested to establish lateralization and determine if adrenalectomy was indicated. Adrenal venous sampling results were significant for left sided lateralization with a lateralization index of 60. This finding was consistent with primary hyperaldosteronism secondary to left adrenal adenoma for which left adrenalectomy was recommended and performed. Subsequently, patient continued follow up at endocrinology clinic where hypertensive therapy was gradually titrated with final resolution of hypertension and hypokalemia.

This case serves the purpose of raising awareness of pursue screening for primary aldosteronism in hypertensive patients among clinicians. Early diagnosis and targeted treatment are of vital importance before adverse cardiovascular consequences develop.

Clinical Vignettes Abstract #48

Abstract Title: Spontaneous Resolution of Mediastinal Thymoma in Late Onset Myasthenia Gravis Patient

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Abstract

Myasthenia Gravis (MG) is an autoimmune disease usually mediated by acetylcholine receptor antibodies at the postsynaptic membrane of the neuromuscular junction. Literature suggests that 90% of patients with MG may present with thymus involvement, presented as thymic hyperplasia in its vast majority (70%) or less commonly presented with underlying thymoma (20%). It has been established that surgery is the treatment of choice in most cases, depending on age and comorbidities. Spontaneous regression of thymomas is a very uncommon phenomenon. To our knowledge, nine cases have been reported and the pathophysiology remains unclear however, some hypotheses suggest cellular apoptosis as the primary mechanism.

This is the case of a 76 year old Female with medical history of hypertension, congestive heart failure, dyslipidemia, MG, and unresected thymoma. In 2018, the patient presented with severe bilateral weakness and dysphagia associated with hypoactivity. After thorough evaluation, the patient was diagnosed with MG associated with the presence of post synaptic acetylcholine receptor antibodies. A contrast chest CT scan was performed and revealed a lobulated anterior mediastinal mass abutting 25% of the luminal circumference of both the ascending thoracic aorta and pulmonary arterial trunk consistent with the presence of a thymoma. Surgery services evaluated the patient and deemed no surgical intervention due to the presence of multiple comorbidities. After neurology evaluation, the patient was started on pyridostigmine and high dose prednisone therapy resulting in an improvement of the patient's clinical symptoms. However, the patient remained completely dependent on activities of daily living given the persistence of fatigue. Furthermore, during December 2020, the patient presented with generalized weakness, fatigue, and respiratory distress. A repeated chest CT scan revealed large pleural effusions and findings consistent with decompensated heart failure, but most important findings were also pertinent for interval decrease in size of mediastinal mass and no presence of metastasis. At that moment, the patient refused any surgical intervention and after medical management, the patient was discharged home. In 2021, the patient returned with signs and symptoms concerning for myasthenic crisis secondary to an infectious pneumonic process. A subsequent follow-up chest CT scan with contrast showed bilateral multifocal pneumonia and resolution of the anterior mediastinal mass 3 years after the initial diagnosis. The patient completed IV antibiotic therapy for a total of 14 days. Afterwards, the patient didn't suffer further relapses, and symptoms nearly resolved.

There have been less than 10 cases reported in the literature of spontaneous regression of thymomas. Although there is very scarce literature, and the mechanism of regression remains unknown it is still challenging and intriguing to determine the pathophysiology of this phenomenon. This case highlights the complete spontaneous regression of a mediastinal thymoma as per radiologic imaging in a patient with late-onset MG.

Clinical Vignettes Abstract #49

Abstract Title: Stronger than you think: case of status epilepticus secondary to synthetic cannabinoid use

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Abstract:

Synthetic cannabinoids are analogs of natural cannabinoids that are chemically synthesized with clinical effects similar to natural cannabinoid intoxication. The synthetic structure of THC used and the constant changes of its components to avoid quality controls and regulatory oversight has been linked to more severe life-threatening symptoms and adverse effects that range from temporary changes in mental status to death. The current widespread abuse of synthetic cannabinoids constitutes a serious global problem to society in general and here we showcase a serious and possibly lethal adverse reaction to this drug.

A 55-year-old male patient with a medical history of Schizophrenia, Type 2 Diabetes mellitus, and drug abuse that was brought to the Emergency Department (ED) after presenting multiple episodes of seizures that were treated with Ativan 2mg IV at ED. The patient reported the use of synthetic cannabinoids before the onset of symptoms. The initial physical examination was unremarkable without focal neurological deficits and adequate vital signs. Afterward, the patient presented an event of refractory status epilepticus, which required Ativan, Keppra, endotracheal intubation for airway protection, and Propofol IV drip treatment.

Laboratory workup was remarkable for toxicology positive for Benzodiazepines only. CBC revealed leukocytosis (14.3) with adequate hemoglobin and platelet levels. Chemistry showed adequate renal function and CPK levels 4,367. Head CT and Brain MRI performed showed no ischemic changes or other intracranial pathology. An EEG was performed and showed low and medium voltage 6-7 HZ theta, alternating with low voltage beta, bilaterally, and intermittent slowing in the 2-3 HZ delta range on the right hemisphere. The patient was placed on aggressive IV hydration to decrease the risk of heme pigment-induced acute kidney Injury and antibiotic therapy for aspiration pneumonia. Antiepileptic drug regime was optimized by Neurology services including Keppra, Dilantin, Propofol drip, and Versed drip, however, the patient remained with recurrent episodes of seizures the following 72 hours after the initial event. Finally, seizures resolved 5 days after initial presentation, and the patient was extubated and discharged home without residual deficits. Adequate orientation about lifestyle changes regarding drug abuse and further outpatient follow-up with Neurology services was coordinated.

Here, we describe a patient who developed status epilepticus secondary to synthetic cannabinoid use. Data on human toxicity are limited despite widespread abuse and real-time confirmatory testing is unavailable to clinicians. Rapid identification of the drug as the causative agent of this adverse reaction could translate to optimal management, better outcomes, and decrease neurological deficits. Further awareness to the general population should be reinforced regarding the increased risks of seizures and complications associated with the use of synthetic cannabinoids.

Clinical Vignettes Abstract #50

Abstract Title: Syncope, Atypical Presentation of Pulmonary Embolism in a Young Latin-American Male

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Abstract

Syncope is a comprehensive yet complex sign since its etiology could range from dehydration to life-threatening conditions such as sudden cardiac death. Therefore, the process of history taking, thorough physical examination, and a high level of suspicion will always play a crucial role in reaching the proper diagnosis.

A 37-year-old male with a history of generalized anxiety disorder and obesity came to the Emergency Department (ED) complaining of loss of consciousness. Symptoms occurred after standing up from the couch, on which he suddenly blacked out and woke up on the floor minutes later. Afterward, the patient had two similar episodes during the day, for which he decided to visit the ED. Denies previous episodes and reports have been working from the house mainly for more than 4 hours straight. Reports having non-productive cough associated with dyspnea and one episode of vomits, without fever, chills, myalgias, or arthralgias. Physical examination revealed no neurological deficit, and lungs were clear to auscultation, extremities unremarkable. No murmurs or gallops were heard on cardiovascular examination. ECG showed sinus tachycardia with deep Q wave and inverted T wave in the lead III. Labs revealed elevated Pro-BNP, D-dimers markedly elevated (3,560), normal cardiac troponins, negative SAR S-COVID 19 PCR, Influenza, and Mycoplasma test. 2D echo revealed impaired right ventricular systolic function with a paradoxical motion of the right ventricular septum with the hyperdynamic movement of the right ventricle consistent with McConnell's sign. Chest CTA was remarkable for extensive pulmonary artery thrombosis involving the right and left main pulmonary arterial branches expanding into the upper and lower lobes branches. The lower extremity duplex revealed extensive deep vein thrombosis of the Left leg. The patient was started in anticoagulation therapy, and workup to assess the hyper-coagulable state was ordered to determine the etiology.

Pulmonary embolism (PE) is a life-threatening condition that needs to be considered part of differential diagnosis when evaluating patients with Syncope. Depending on the disease extent, it might lead to Right Heart Failure, hemodynamic instability, and even death if not treated promptly. Untreated can progress to Pulmonary Hypertension and Right Heart Failure leading to severe disability. In our patient with non-classic clinical presentation, hemodynamically stable, and Well's Score of 1.5, 2D echo and D-dimers helped narrow differential diagnosis. A few retrospective studies have described syncope as an atypical presentation of PE, which presents without symptoms of dyspnea, tachypnea, pleuritic chest pain. This case is an example of why Physicians should have a high level of suspicion for PE when evaluating patients with Syncope, even with low probability for PE as per Well's Score, as well as to use available tools including ECG and appropriate imaging modality according to risk stratification and clinical presentation.

Clinical Vignettes Abstract #51

Abstract Title: Syndrome of Inappropriate Antidiuresis secondary to Infective Endocarditis in a non IV Drug User

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Abstract

Syndrome of Inappropriate antidiuresis (SIAD) occurs mainly when excessive antidiuretic hormone is produced. This disease has mainly been described in people with heart failure, malignancies, hypothalamus diseases and even infectious processes yet its role in patient with infective endocarditis has been limited and not clearly understood.

Case of 92 year old man who came to the hospital due to fever, hypoactivity and general malaise with dysuria and chills after an indwelling foley exchange. Patient was admitted to IM ward under the diagnostic impression of CAUTI. Was initially started on Ceftazidime/Avibactam for treatment of CAUTI. Must remark he was recently discharged from a hospital in Florida on Home IV for treatment of infective endocarditis secondary to Enterococcus species with 6 weeks of Meropenem therapy. Patient with history of aortic bioprosthetic valve replacement secondary to aortic stenosis and s/p pacemaker placement due to sick sinus syndrome.

Upon evaluation patient was found with hyponatremia 121, initial assessment was due to hypovolemia for which he was given 2L of 0.9%NSS. Nevertheless after this, hyponatremia worsened to 118. Nephrology services were consulted and SIAD was suspected due to elevated specific gravity in 1.014 and elevated urine Na 82, elevated FeUric acid in 15.8% and decreased serum uric acid <4 which confirms it. TSH and cortisol levels were normal. The patient was started on Vancomycin and Ceftazidime/Avibactam and received a large quantity of 0.9%NSS daily. Also, Furst equation showed that fluid restriction of < 500ml of fluid/day would work in this patient. Therefore, patient started on urea and salt tablets. Both of these would increase solute intake and thus increase free water losses. His sodium levels improved with this therapy. Blood cultures grew Enterococcus faecalis, concerning for endocarditis. Transthoracic echocardiogram was remarkable hypermobile mass on mitral valve concerning for possible vegetation. This patient was not using SSRIs, antidepressants, anticonvulsants, did not have CNS nor lung disease or any other common cause of SIAD. Thus, the main suspicion as the cause of his SIAD was infective endocarditis. Literature review shows very few cases of patients with bacterial endocarditis who developed SIAD but has only been described in patients with known narcotic addiction. This patient had no history of drug abuse.

This case report is important for physicians because it would help: Recognize that there are possible undescribed causes of SIAD; Suspect SIAD as a cause of hyponatremia in patients with infective endocarditis; Acknowledge that the treatment with IV antibiotics can make treating SIAD more difficult due to amount of fluid being given; and Appreciate that using urea (Not FDA approved, but a medical-food) as co-therapy in SIAD is helpful and can help avoid use of fluid restriction and salt tablets long term in some patients.

Clinical Vignettes Abstract #52

Abstract Title: Tainted Love: A Complication of Peripartum Cardiomyopathy

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Abstract

Peripartum cardiomyopathy (PPCM) is a rare cause of heart failure presenting toward the end of pregnancy or up to 5 months following delivery, affecting 1 in up to 4,000 people. It is considered a diagnosis of exclusion and although its etiology may be multifactorial, it remains unknown. PPCM usually presents with signs and symptoms of heart failure, however it may present with thromboembolic complications, such as ventricular thrombus, pulmonary embolus, or deep vein thrombosis.

This is the case of a 25-year-old G2P2 female patient with history of giving birth 2 months earlier, who came to the emergency room after developing shortness of breath, leg swelling, early satiety, and abdominal discomfort of one week duration. Physical exam was remarkable for jugular venous distention, bibasilar decreased breath sounds and bilateral +1 lower extremity pitting edema. Laboratories were remarkable for an elevated BNP in 458. An abdominopelvic CT scan with IV contrast revealing minimal ascites, passive hepatic venous congestion, and incidental finding of dilated cardiomyopathy with biventricular apical intracavitary thrombi measuring 13x12mm and 25x48mm. To further evaluate these incidental findings, bedside preliminary echocardiogram was performed revealing reduced ejection fraction of 15-20% and the presence of the thrombi. Based on the patient's clinical and imaging findings, she was admitted with the diagnosis of acute decompensated heart failure with reduced ejection fraction most likely secondary to peripartum cardiomyopathy. Once admitted she was started on guideline-directed medical therapy. In the setting of biventricular apical thrombi, anticoagulation with warfarin and enoxaparin as bridging therapy were started with a goal INR of 2-3.

Women's risk for developing thrombus increases up to 20-fold postpartum, due reduced fibrinolysis and increase of procoagulant factors, which include fibrinogen, von Willebrand factor, factors II, VII, VIII, X and XII. In addition to the hypercoagulable state, patients with PPCM with left ventricular ejection fraction less than 30% are at a higher risk for developing ventricular thrombus as seen on this patient. Currently there are no published data available to decide between therapeutic versus prophylactic anticoagulation, however anticoagulation therapy with low molecular weight heparin (LMWH), heparin or warfarin should be considered for thrombotic complications. The novel oral anticoagulants (NOACs) are currently advised against in view that they have not been studied during pregnancy or lactation. Even though warfarin and LMWH are considered safe during lactation, LMWH does not cross the placenta, for which it should be considered the anticoagulation of choice during PPCM, unlike warfarin which crosses the placenta and may cause embryopathy and fetopathy.

Clinical Vignettes Abstract #53

Abstract Title: There's more to Anemia That Meets the Eye

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Abstract

Introduction

Anemia is a decrease in the total amount of red blood cells or hemoglobin obtained as a part of a complete blood count (CBC). The evaluation may be straight forward but, in many cases, the cause is more complex. Anemia is classified based on the mean corpusculum volume (MCV), as microcytic, normocytic or macrocytic. Among the numerous causes of anemia, the most common include acute blood loss, iron deficiency, vitamin deficiency, hemolytic anemia and related to chronic disease. The immune system can be responsible, as seen with autoimmune conditions as; Pernicious Anemia, which causes vitamin B12 deficiency or Autoimmune Hemolytic Anemia, caused by autoantibodies that react against self-red blood cells. We describe a patient with symptomatic macrocytic anemia, previously diagnosed with pernicious anemia, who did not improve with vitamin B12 replacement.

Abstract

Case of a 76 y/o female with past medical history of pernicious anemia, hypertension, osteoarthritis, and diabetes mellitus type 2 was admitted to our institution with diagnosis of symptomatic anemia. Patient presented with tiredness and fatigue. CBC showed hemoglobin levels 5.8g/dL, hematocrit 17.2%, and MCV 114.7. Vitamin B12 levels were low at 109.0L and normal folate levels of 10.400ng/mL. where obtained. The patient received two units of red blood cell transfusion and was started with IV vitamin B12 replacement. After receiving blood transfusion, hemoglobin levels where 8.6g/dL. The following day, there was a diminishment of hemoglobin levels from 8.6 to 7.6 without any bleeding episode. Fecal occult blood test was negative. Further anemia workout demonstrated findings that suggest a concomitant hemolytic anemia was occurring. Laboratories showed elevated lactate dehydrogenase 3812IU/L, low haptoglobin less than 10L and normal reticulocyte count. Hemolysis without reticulocytosis most likely due to vitamin B12 deficiency. Common causes of hemolytic anemia in adults were ruled out with the assistant of laboratories and patient's past medical history. Hemoglobin levels continued to decrease until IV steroids were administered due to the suspicion of warm autoimmune hemolytic anemia.

This case illustrates the importance of a complete evaluation in patients admitted with diagnosis of anemia despite previous diagnosis. Recurrent visits to other health institutions due to the same diagnosis could have been avoided for this patient with an incisive evaluation. Our patient is an example of two autoimmune pathologies simultaneously causing anemia with different mechanisms. The relevance of the case is to create consciousness if the existence of these type of patients that require multiple medical therapies for their conditions to prevent recurrent episodes of anemia.

Clinical Vignettes Abstract #54

Abstract Title: Third Trimester Pregnancy as a cause of hypokalemia and hypertension

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Abstract

The Third trimester of pregnancy is a challenging period for medical management. Certain conditions such as preeclampsia, eclampsia, HELLP Syndrome and gestational diabetes and uncontrolled hypertension may endanger pregnancy. One impactful condition is hypokalemia and hypertension caused by changes in hormones controlling potassium handling and blood pressure. However, elevated progesterone levels typically found in the third trimester may unmask underlying conditions

Case of 22 y/o woman G1P0, intrauterine pregnancy 32/2 weeks was brought to this institution due to contractions and elevated BP of 125/90 at office. Vitals were BP: 145/92, HR: 95, RR: 15, T: 36.8. Patient was well nourished, gravid and found with trace pedal edema. She was admitted to rule-out preeclampsia. Initial laboratories showed severe hypokalemia: 2.6 mmol/L (N: 3.5-5.0), hypomagnesemia: 1.5 mg/dL (N: 1.7-2.6), Sodium: 139, Chloride: 104, Bicarbonate: 19, Glucose: 95. She denies diarrhea, vomiting, abdominal pain, blurred vision, headache, palpitations nor weakness. Urine spots showed potassium excretion: 20 (indicating potassium wasting), urine creatinine: 78, urine chloride: 28 (indicating saline-resistance) aldosterone levels: <3 ng/dL (N: 4-31) and renin levels: 1.5 ng/ml (N: 0.5-4.0). Patient denies ingestion of licorice or diuretics, family history of electrolyte disorders or hypertension. Records prior to her visit showed she never had hypokalemia nor hypertension during or prior to her pregnancy. She was treated with magnesium and potassium replacement, yet serial measurements of potassium levels were below 3mmol/L despite aggressive replenishment. Patient's hypertension was treated with Labetalol 200mg PO q12hrs and Magnesium sulfate infusion, which helped keep her BP between 130/80-140/85. Despite this, the patient had elevations of liver enzymes and increased urine protein excretion in 24-hr urine collection for which she had an emergency C-Section. A 3lb. baby girl was delivered and placed in the NICU for monitoring. After procedure, patient's BP was controlled with labetalol with a mean BP of 125/85; potassium levels were 3.5mmol/L after delivery. Patient was discharged with labetalol and PO Potassium citrate with follow-up in IM clinics.

This rare form of hypokalemia and hypertension presenting abruptly in the third trimester of pregnancy which solved after surgery may be explained by apparent mineralocorticoid excess causing a pseudohyperaldosteronism. Patient's low levels of renin, aldosterone and renal potassium wasting not resolving with multiple infusions most likely could be due to elevated progesterone levels in the third trimester. Geller Syndrome is a condition in which excess progesterone exerts aldosterone-like effect in a mutated mineralocorticoid receptor; which causes increased blood pressure due to sodium reabsorption and potassium wasting. Management involves correcting BP and hypokalemia during pregnancy, to which they resolve after pregnancy termination.

Clinical Vignettes Abstract #55

Abstract Title: Unusual Complication after a controlled ovarian stimulation presenting as ascites

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Abstract

Assisted Reproductive Technologies that comprise all interventions included in vitro, have become an integral element of care for women suffering from infertility. Ovarian hyperstimulation syndrome (OHSS) is the most serious complication of controlled ovarian hyperstimulation (COH) for assisted reproduction technologies (ART). Hereby we are describing the case of a patient who developed severe OHSS presenting prominent ascites who benefitted from early onset cabergoline therapy and paracentesis.

Case of 28 y/o female with past medical history of hypothyroidism and hyperprolactinemia admitted after presenting worsening abdominal distention, vomiting and decreased urine output 3 days after receiving treatment before a planned follicular extraction. She initially was started on intramuscular follistim and Menopur, exogenous gonadotropins, preceded by intramuscular progesterone in preparation for said extraction. On physical examination, there was a pronounced abdominal ascites with positive fluid wave accompanied by abdominal discomfort at palpation, tachycardia of 103bpm, oliguria (less than 0.5cc/kg/hr) but no palpable masses. Evaluation showed leukocytosis of 23.0K/uL, hematocrit level of 43.5 g/dl (N: 36-48% in females), hypotonic hyponatremia with sodium level: 134 (136-145mmol/L), serum osmolality of 268 mOsm/L (N: 269-295mOsm/L), estradiol level of 3,057 pg/ml and progesterone level of 253.3 ng/ml; hormones both well above normal range compatible with response to ovarian stimulation therapy received. Afterwards, abdominal ultrasound was done reporting small to moderate amount of ascites and findings highly suggestive of OHSS. Endovaginal Ultrasound showed a prominent endometrium measuring 6.5 x 5.0x 3.2 cm with bilateral large ovaries containing numerous complex cysts. Patient was started with intravenous hydration to maintain adequate intravascular volume and cabergoline 0.25mg intravaginally daily, a dopamine agonist associated with a significant reduction in the incidence of symptoms and signs of moderate to severe OHSS. Her symptoms improved initially, but three days later she complained of worsening abdominal distention, to which abdominal ultrasound was repeated to localize a pocket for abdominal paracentesis. Paracentesis was performed: 1.8 liters of yellow fluid were aspirated and ascites resolved.

Severe forms of OHSS are rare. They represent iatrogenic complications with potentially fatal outcomes in women undergoing fertility treatment; which needs close attention to avoid life-threatening complications. Although the most severe form of OHSS is rare as in our patient, the incidence observed over time is less than 1% reported in literature. This case is an example of women with low risk factors who develop severe OHSS who had a good response to dopamine agonist therapy. As strategies to reduce the incidence of OHSS and its severity, clinical trials are needed to study the efficacy as well as safety of different doses and durations of cabergoline administration for both prophylactic and therapeutic purposes.

Clinical Vignettes Abstract #57

Abstract Title: When social determinants of health lead to cachexia: Challenges for identifying a case of Scurvy in a developed country

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Abstract

Scurvy is characterized by distinct signs and symptoms which appear within months of a vitamin C-deficient diet. In the United States, vitamin C deficiency occurs rarely and is mainly associated with severe malnutrition secondary to various etiologies. We present a challenging case where the suspicion of malignancy versus other rheumatologic disorders masqueraded scurvy as the culprit of the patient's presentation.

A 57-year-old Hispanic male with a history of gastroesophageal reflux, gastritis, vitiligo, major depressive disorder, and retinal detachment presented to the emergency department after being found unconscious at home with loss of urinary sphincter control. Upon awakening he slowly regained consciousness, and could not identify any precipitating factors. A review of systems was remarkable for fatigue and unintentional weight loss of sixty pounds in approximately two years, but no other symptoms. Physical examination showed a chronically ill, cachectic patient, with bilateral temporal wasting, dry oral mucosa, poor dental hygiene, atrophic taste buds, bilateral arcus senilis with visual loss of right eye, and dark-brown colored urine in his Foley bag. Extremities showed marked muscle atrophy, non-pitting edema up to the ankles, bilateral ankle hematomas, a large hypopigmented patch, and multiple non-tender, non-palpable and non-blanching violaceous 0.5 mm round macules surrounding hair follicles. Laboratory tests were remarkable for leukopenia, normocytic anemia, and platelet count within normal limits. Electrolytes and renal function tests were normal, except for metabolic alkalosis and a mild elevation of inflammatory markers and antinuclear antibodies. Urinalysis showed ketonuria. Colonoscopy and computed tomography imaging with contrast were normal. Laboratory tests and imaging suggested against malignancy or rheumatologic disease. Skin biopsy suggested perifollicular purpura, as seen in vitamin C deficiency. Laboratory tests confirmed vitamin C deficiency with levels at 0.1 mg/dL. The patient was diagnosed with Scurvy due to severe malnutrition, and after appropriate supplementation, he improved clinically.

We present a case of a Puerto Rican male that, after an episode of syncope and severe cachexia, resulted in a diagnosis of Scurvy. Malignancy and vasculitis were higher in the differential diagnosis as severe malnutrition is rarely seen in developed countries; however, poor social support led to food insecurity and severe malnutrition in this patient. Minority groups face social determinants of health that limit the accessibility to adequate nutrition and health care services. In particular, the Puerto Rican population has been shown to have worse health outcomes when compared with other Hispanic subgroups. More research is needed to identify the social determinants of health that lead to different health outcomes between minorities as this could lead to identifying problems that could be managed with public health policies that improve the quality of life of these populations and avoid preventable diseases, such as the one presented in our case.

Clinical Vignettes Abstract #58

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Abstract Title: Zieve's Syndrome: Alcohol Abuse as an Underlying Cause of Hemolytic Anemia

Abstract

A triad of cholestatic jaundice, hemolytic anemia, and transient hyperlipidemia as a sequelae of alcohol-induced liver injury is also known as Zieve's syndrome. This syndrome is under-recognized, and the prevalence is underestimated in the literature.

Herein we present the case of a 34-year-old female patient G4P2A2 with medical history of Major Depressive Disorder, and Alcoholism who arrived at the Emergency Department after developing yellow discoloration of the eye and skin, along with abdominal pain, nausea, vomiting, and diarrhea following one week of binge drinking. Vital signs upon arrival significant for tachycardia (HR: 102bpm); otherwise, stable. Physical examination revealed an alert, awake, oriented to all spheres, acutely ill-looking patient, with jaundiced skin, scleral icterus, dry oral mucosa, increased abdominal girth, tenderness in the epigastric region and increased liver span at the midclavicular line. Initial laboratory work-up was significant for leukocytosis ($12.9 \times 10^3/\mu\text{L}$) with neutrophilic predominance (77%), normocytic-normochromic anemia (7.3 g/dL, baseline 14.7 g/dL) and platelet count within normal range. Coagulation profile with INR: 1.72, prolonged PT: 20.9 secs. and PTT: 52.6 secs. Metabolic panel showed preserved renal function, hyponatremia (129 mEq/L), hypochloremia (87 mEq/L) and hypokalemia (2.8 mEq/L). Liver chemistries revealed transaminitis with AST: 196 and ALT: 43, elevated alkaline phosphatase (298 IU/L) and hyperbilirubinemia (T. bili: 21.85 mg/dL). Pancreatic enzymes were within normal ranges. Lipid profile with hypertriglyceridemia (200 mg/dL). Abdominal echogram was remarkable for the presence of fatty liver disease with marked hepatomegaly, tortuous vessels were discerned at the level of hilum raising concern for the presence of varices. Abdominopelvic CT showed hepatomegaly with the liver measuring 32.6 cm at the midclavicular line (compared with 21.5 cm the year prior), portal hypertension, patent portal and splenic veins, without splenomegaly. Patient was admitted to the Intensive Care Unit with the diagnostic impression of an Acute Alcoholic Hepatitis with a Maddrey's Discriminant Function of 47.3. Intravenous methylprednisolone therapy was started, along with supportive treatment for alcohol withdrawal. Furthermore, work-up raised alarm for hemolytic anemia; bilirubin partition noted with indirect predominance, there was elevated reticulocyte count, no schistocytes seen on peripheral, elevated LDH (331 U/L), increased D-dimer (1.28 ug/mL), low haptoglobin (<10 mg/dL) and low fibrinogen (169 mg/dL). Other etiologies for hepatic failure in this young-adult female patient such as autoimmune hepatitis and Wilson's disease were discarded. As Coomb's-negative-hemolytic anemia was confirmed, concomitant hyperbilirubinemia and hyperlipidemia led to Zieve's syndrome diagnosis.

This syndrome often has a fair prognosis when diagnosed early, and efforts in favor of alcohol abstinence are implemented with success. Hemolytic anemia usually ceases multiple weeks to months later, as the liver inflammation wanes. Identifying this syndrome avoids overtreatment and long-term morbidity caused by steroid therapy and invasive procedures.