BREAKOUT
ROOM
NUMBER NINE

CV 81 - 90
CARCINOMATOUS ENCEPHALITIS (MILIARY METASTASES): CLINICAL PRESENTATION

INTRODUCTION: Carcinomatous Encephalitis (CE) is a rare form of brain metastases, originally described by Madow and Alpers in 1951, characterized by diffuse, scattered tumor infiltration of brain parenchyma, perivascular spaces, and meninges without inflammation. We report this case of a previously healthy executive who presented with acute cognitive changes secondary to CE from an occult lung adenocarcinoma.

CASE DESCRIPTION: A 56-year-old man, non-smoker with high blood pressure, was brought to the emergency department by his daughter due to acute onset of slurred speech and inability to answer questions appropriately over the phone. The history dated back to a week prior when he wasn’t answering questions appropriately at work. Physical exam was significant for crackles auscultated over the right chest. Neurological exam showed orientation to person only, Mini-Mental State Examination (MMSE) 15/30, dysarthria, expressive aphasia and minimal ataxia to the right on tandem gait test. Lab work revealed leukocytosis with left shift. Chest X ray showed right lower lobe consolidation. Initial differential diagnosis included stroke, seizure with aspiration pneumonia, delirium with meningitis/encephalitis and CNS vasculitis. However, CT head, CT angiogram of head and neck and EEG were all within normal limits. On further testing, MRI brain with contrast revealed innumerable small enhancing nodules throughout supra and infra-tentorial compartments involving brain parenchyma and CSF spaces most consistent with metastases. CT chest, abdomen and pelvis to look for source of metastasis, showed 3 cm right upper lobe mass, numerous pulmonary metastatic nodules with hilar, mediastinal adenopathy, retroperitoneal adenopathy and diffuse osseous metastatic disease. Endobronchial ultrasound with core needle biopsy of mediastinal lymph nodes showed metastatic adenocarcinoma of lung. Our patient was started on high dose steroids and radiotherapy. As his condition worsened, he was discharged to inpatient hospice. He subsequently passed away within one month of the diagnosis.

DISCUSSION: Acute significant cognitive decline as the first symptom of undiagnosed adenocarcinoma of the lung with brain metastases is rare. CE should be considered even after a normal CT head scan.
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ABSTRACT FORM: Must be at least 10-point font. A sharp typeface will help reproduction. Be sure to single-space and STAY WITHIN THE BORDERS!
DELFITIA AND OERSKOVIA: RARE PATHOGENS CAUSING CLABSIs
Shalinder Singh, MD; Louis Saade, MD
MedStar Health – Internal Medicine Residency Program

Introduction
Delftia acidovorans, an aerobic, Gram-negative bacillus, and Oerskovia species, gram-positive bacilli, rarely pathogenic, even in immunocompromised patients. This case report describes the significance of these microorganisms in patients with long term indwelling lines.

Case Description
A 74-year-old female with a history of subtotal colectomy, ileostomy and Hartman's pouch (1990), on TPN via term left femoral tunneled catheter (>3 months) and multiple CLABSIs, presented to ED with intractable nausea and vomiting. The patient was afebrile, hemodynamically stable with unremarkable physical exam. Given the lack of fever and leukocytosis, patient was discharged home from the ED after blood was collected for cultures, which eventually grew gram-positive and gram-negative rods. Patient was called back and admitted to the hospital and was started on IV antibiotics with linezolid and piperacillin/tazobactam. Blood cultures ultimately grew Delftia acidovorans and Oerskovia species and patient was later discharged on Zyvox and Omnicef for 2 weeks.

Discussion
Delftia Acidovorans is usually a nonpathogenic ubiquitous gram-negative rod, usually found in soil, water and the hospital environment. Rarely, it has been known to cause intravascular catheters, endocarditis, peritonitis, ocular infections and UTIs. Similarly, Oerskovia species, are nocardia like gram-positive rods, rarely causing human infections. Similar studies revealed favorable outcome after catheter removal. Treatment with multiple agents is preferable because of the high rate of relapse and the emergence of drug resistance.

Conclusion
Although extremely rare, we do find other case reports of infections with D. acidovorans and Oerskovia species, individually. However, to our knowledge, this is the first case report of simultaneous bacteremia with these 2 species in a patient with recurrent central line-associated bloodstream infection.

CV 83

BREAKOUT ROOM 9

ABSTRACT FORM: Must be at least 10-point font. A sharp typeface will help reproduction. Be sure to single-space and STAY WITHIN THE BORDERS!
A CASE OF ALVEOLAR RHABDOMYSARCOMA IN AN ADULT PATIENT WITH PROLONGED SURVIVAL. Farrukh Q. MD. University of Maryland School of Medicine and VA Medical Center, Baltimore, MD.

Alveolar rhabdomyosarcoma (ARMS) is an aggressive soft tissue malignancy occurring most commonly in adolescents and young adults as masses in the extremities, head, and neck. Cases in adults are exceedingly rare with an increased risk of metastatic disease. Cure rates in children with metastatic disease are reportedly as low as 10%, whereas among adults near 0%.

In 2006, a 41-year-old with diabetes presented with epistaxis and right eye proptosis found to have right ethmoid sinus mass protruding in the right eye and bones marrow metastases causing severe thrombocytopenia. The patient had significant antibodies to available blood products. The patient’s identical twin sister donated blood products and platelets. With the cessation of acute bleeding, the patient moved forward with chemotherapy.

She was treated for Stage I ARMS with a pediatric protocol ARST 0413. This protocol includes one year of alternating chemotherapy with vincristine sulfate, actinomycin-D and cyclophosphamide with vincristine, doxorubicin, cyclophosphamide, followed by radiation and chemotherapy with irinotecan and vincristine. After half a year without chemotherapy, her malignancy recurred in December 2007 via a regional lymph node. She was again re-challenged with ARST 0413 and initiated on salvage chemotherapy with cyclophosphamide and Navelbine from July 2008 until October 2011 with dose reductions through her course. She was eventually transitioned to metronomic dosing of cyclophosphamide. In July 2012 she was noted to have increasing LDH up to 500 u/L necessitating PET imaging which showed no metabolic evidence of active malignancy. Otherwise, through her metronomic chemotherapy course (from October 2011 until June 2017) she reported excellent quality of life. She was last seen in May 2019 and has currently been 11.5 years with no evidence of disease, reportedly cured, and in the survivorship program.

Little is known about improving outcomes in adult-onset ARMS, but our patient’s case highlights the potential that transfusion of blood products from an identical twin might have led to reprogramming of the patient’s immune system, which resulted in significantly prolonged survival.
SPINAL CORD COMPRESSION AS A PRESENTATION OF NEUROSARCOIDOSIS. Nguyen A, MD. The University of Maryland School of Medicine and VA Medical Center, Baltimore, MD.

Sarcoidosis is a multiorgan disease of unknown etiology that is characterized by noncaseating granulomas. Incidence peaks twice, first in young adults and then around age 60. Most commonly affected organs include the lung, liver, skin, and eye but virtually every organ can be affected. Neurologic involvement occurs in 5-10% of cases and often involves the cranial nerves, meninges, or anterior hypothalamus. Myelopathy or radiculopathy can also occur. We present a case of neurosarcoid presenting with spinal cord compression.

A 65-year-old African-American man with a past medical history of chronic back pain presented to the emergency department with 6 weeks of progressive abdominal and bilateral leg numbness and saddle anesthesia without weakness. Neurologic exam was remarkable for decreased pinprick and temperature sensation distal to the T7-T8 dermatomes right greater than left with patchy areas of more intact sensation on the left lower extremity. Vibration sensation was decreased at L4 and below. Proprioception and reflexes were minimally affected, and strength was intact throughout.

Patient was started on intravenous dexamethasone and taken urgently for magnetic resonance imaging, which revealed an expansile intramedullary T2 hyperintensity lesion within the thoracic spinal cord extending from T3 to T9 with patchy enhancement. Neurosurgery felt the lesions were not amenable to biopsy due to the high-risk location. Lumbar puncture was performed, and cerebral spinal fluid cultures, cytology and flow cytometry were unremarkable. During his hospitalization, the patient developed bladder incontinence and constipation that improved.

Dexamethasone was transitioned to prednisone. Positron emission tomography revealed multiple hypermetabolic lesions in the mediastinum, lung hila, right lung, liver and peripancreatic region. Transbronchial aspirate of the metabolically active thoracic lymph nodes showed aggregates of epitheliod histiocytes in a background of polymorphic lymphocytes, consistent with granulomatous inflammation.

The patient was diagnosed with systemic sarcoidosis and likely neurosarcoidosis. He was started on mycophenolate mofetil with plans for long-term prednisone taper.

Neurosarcoidosis should be considered in patients with progressive central neurologic symptoms even in the absence of other obvious lesions. Early immunologic therapy can be essential in preventing further neurologic progression.
NEUTROPENIC FEVER AND GASTROINTESTINAL HEMORRHAGE IN NEW ONSET HEMOPHAGIC CYTIC LYMPHOHISTIOCYTOSIS. Orkoulas-Razis, D MD, Ritaccio, G MD, and Lutfi, F MD. University of Maryland Medical Center and Baltimore VA Medical Center. Baltimore, MD.

Hemophagic Lymphohistiocytosis (HLH) is a rare, aggressive syndrome of excessive immune activation predominantly seen in infants but can also present in adults as a familial or acquired disorder. Early diagnosis is critical as prompt treatment improves outcomes.

51-year-old woman with history of relapsed Peripheral T-Cell Lymphoma (PTCL) presented with dysuria 1 month after haploidentical hematopoietic cell transplant. She was febrile to 39.3°C with worsening pancytopenia and was admitted for febrile neutropenia. A recent PET CT revealed FDG avid sites in the bone marrow and splenomegaly concerning for possible relapse. Work-up revealed multiple viral reactivations (CMV, BK virus and HHV-6) and treatment was started with Gancyclovir. On hospital day 3, the patient developed bright red blood per rectum. Hemoglobin decreased from 7.6 g/dl to 6.1 g/dl. A peripheral smear revealed schistocytes, direct Coombs test was positive, and haptoglobin was <20 mg/dl. She was started on intravenous immunoglobulin (IVIG) for treatment of hemolysis as well as methylprednisolone and pantoprazole for gastrointestinal bleed. On hospital day 5, she was transferred to the intensive care unit. Further work-up revealed a ferritin of >50,000 ng/mL, concerning for HLH. Hematology was consulted, and a bone marrow biopsy was performed. Biopsy revealed trilineage hypoplasia with 1 phagocytic histiocyte and no recurrent PTCL. Gram Stain and Acid-Fast Bacillus smears were negative.

This patient met 6/8 diagnostic criteria for HLH and was started on dexamethasone and Tocilizumab prior to Etoposide and IVIG. The patient continued to have hemodynamically significant gastrointestinal bleeding, which did not respond to transfusion of blood products. The patient elected for comfort care and passed away shortly thereafter.

This case illustrates the complexity of diagnosing and managing secondary HLH and distinguishing early disease from malignancy relapse. It is imperative to treat the underlying cause as it serves as a stimulus for immune activation. Half of all cases are due to prior malignancy, while a third are due to an infectious cause. This patient had both malignancy and infection so it is unclear if one or both conditions contributed to her presentation. Furthermore, delay in diagnosis delayed treatment for HLH-specific therapy with etoposide and dexamethasone which achieves five-year survival in more than half of patients.

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PROSTATE CARCINOMA MASQUERADING AS MULTIPLE MYELOMA

INTRODUCTION: Metastatic prostate cancer typically presents with osteoblastic bone lesions on imaging. This is a report of a patient who presented with osteolytic lesions, hypercalcemia, and clinical symptoms consistent with Multiple Myeloma, but was ultimately diagnosed with metastatic prostatic adenocarcinoma.

CASE PRESENTATION: A 56-year-old man with a history of pathological burst fracture of the 7th cervical spine after a bicycle accident the prior month presented to the emergency department with a 3-weeks of severe back pain. On examination, the patient was somnolent with dry mucous membranes. Laboratory evaluation showed serum calcium of 15.8 mg/dL (reference range 8.4 – 10.2), normocytic anemia, and acute kidney injury. Non-contrast computed tomography demonstrated numerous lytic lesions throughout cervical, thoracic, and lumbar spine, as well as bilateral hydronephrosis, irregular thickening of the bladder wall, and prostate enlargement. Urine and serum protein electrophoresis were within normal limits. Whole body bone scan failed to show abnormal tracer accumulation. Prostate specific antigen was elevated at 718 ng/mL (reference range 0 – 4).

Despite having clinical findings consistent with multiple myeloma, the diagnosis of prostate cancer was confirmed with a biopsy of the bladder and prostate, which revealed high-grade prostatic adenocarcinoma with bladder invasion. Therefore, although prostate cancer typically presents with osteoblastic bone lesions on imaging, this diagnosis should also be entertained in the setting of diffuse lytic lesions of the spine.

DISCUSSION: Though rare, prostatic carcinoma can cause osteolytic bone lesions. The receptor activator of nuclear factor kappa-B (RANK)/RANK ligand (RANKL) signaling promotes osteoclastic activity. Metalloproteinases, such as matrix metalloproteinase (MMP) 7, are produced by osteoclasts in response to prostate cancer cells. They can cleave membrane-bound RANKL into a secretable soluble protein, which increases bone destruction. Typically, tumor cells that cause osteoblastic metastasis produce osteoblast differentiation factors, such as endothelin-1, bone morphogenic proteins (BMPs), insulin-like growth factors (IGFs), platelet-derived growth factors (PDGFs), and fibroblast growth factors (FGFs), all of which drive the development of osteoblastic metastases.

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ABSTRACT FORM: Must be at least 10-point font. A sharp typeface will help reproduction. Be sure to single-space and STAY WITHIN THE BORDERS!
A Case of Hodgkin’s Lymphoma Presenting as Superior Vena Cava Syndrome

Background: Hodgkin’s lymphoma (HL) remains an uncommon cancer and is rare cause of Superior vena cava (SVC) syndrome. Only 24 cases have been reported in the literature to date.

Case: A 53-year-old male with no significant medical history presented with worsening dyspnea, a nonproductive cough, night sweats, dysphagia and facial swelling over a period of three weeks. Laboratory testing revealed white-blood-cell count 5200/mm3, lymphocytes 720/mm3 (14.0%), eosinophils 520/mm3 (10.1%), albumin 3.7g/dL, lactate dehydrogenase 250 U/L, and negative HIV antigen/antibody. A computed tomography (CT) scan of the neck and chest revealed diffuse mediastinal lymphadenopathy, the largest mass was localized in the right paratracheal region, measured 8.4x7.3x8.3cm and was causing significant compression on the SVC. CT of the abdomen and pelvis revealed multiple liver and splenic masses, suggestive of metastases, and diffuse lymphadenopathy. On endobronchial ultrasound guided bronchoscopy with a transbronchial needle aspirate no immune-phenotypic or morphologic abnormalities were identified. Subsequently, thoracoscopy and biopsy of the mediastinal mass was performed, pathology was consistent with classic HL, nodular sclerosis type. PET CT demonstrated metabolically active lymphadenopathy involving the neck, chest, and abdomen, as well as extranodal sites, and the axial skeleton. The patient was treated with 6 cycles of doxorubicin, dacarbazine, bleomycin, vincristine (ABVD regimen) and is in remission at the time of this writing.

Discussion: HL often presents as mediastinal tumors, but rarely SVC syndrome. This condition presents in individuals aged 7 to 47 years old, with a gender ratio around 1:1. Nodular sclerosing classical HL is the most common subtype. Individuals have a more advanced stage at diagnosis and lower responses rates. In this patient, the International Prognostic Score (IPS) was calculated to be 4, which predicts a 5-year freedom from progression of 51% and overall survival of 61%. SVC syndrome may develop during or after therapy, secondary to indwelling catheters or radiotherapy. Endovenous recanalization should be considered in the setting of respiratory compromise or depressed brain function but may be associated with complications. Glucocorticoids may also be used to mitigate the symptoms.

Conclusion: HL remains a relatively rare cause of SVC syndrome. Urgent diagnosis and treatment of the underlying lymphoma are important in reversing the SVC syndrome.
Thyroid Storm in Moyamoya Disease
Karela Herrera-Enriquez, Offdan Narvaez-Guerra, Henry G. Fein

Introduction
Thyroid storm (TS) is a life-threatening manifestation of thyrotoxicosis. An early index of suspicion is key to successful management. Moyamoya disease (MMD) concurrent with Graves’ disease (GD) is rare, however TS associated with MMD has not been described. We present a case of TS in a patient with MMD.

Clinical Case
A 32-year-old woman with history of hyperthyroidism due to GD on Methimazole and a recent diagnosis of MMD complicated with left thalamic hemorrhagic stroke, who had PEG and Trach tubes, presented to the ER due to severe agitation. Temperature was 40.8 °C, HR 175 bpm, BP 175/112 mm Hg and RR 28 rpm. Nervousness, warm skin with profuse diaphoresis, severe lid lag, and bilateral proptosis were seen. She had regular heart sounds and coarse breath sounds bilaterally, without crackles, wheezes, or rhonchi. Abdomen was benign and the site around PEG tube was clear. On neurological exam, she was nonverbal and unable to follow commands due to agitation. Laboratory studies did not show leukocytosis but showed a low TSH (0.009 mIU/L). Free T4 and T3 were normal. Thoracic-abdominal imaging did not show any foci of infection. Infectious workup including a lumbar puncture was negative. She developed seizures while in the ER which was complicated with status epilepticus. Burch-Wartofsky Point Scale was 95, highly suspicious for TS. Home doses of propranolol and methimazole were increased, she was transferred to ICU, was started on empiric Vancomycin, Piperacillin/Tazobactam, Acyclovir, and received stress dose steroids. Fever and seizures resolved, and she was discharged to her nursing home.

Discussion
TS is a rare disorder with mortality of 30%, characterized by severe thyrotoxicosis and hemodynamic instability. Diagnosis is based on clinical signs and lab findings as the degree of hyperthyroidism is not a criterion for TS diagnosis. The Burch-Wartofsky Point Scale is used to estimate risk. Use of Intravenous β-blockers, thionamides, and high-dose glucocorticoids require close monitoring in an ICU. Elevated thyroid autoantibodies have been observed in patients with MMD, and immune aberrancies associated with underlying thyroid autoimmunity also play a role in development of MMD. This is the first case report to describe TS in a patient with underlying MMD.

CV 89

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Title: A SEVERE CASE OF STREP: AS FAR AS THE EYE CAN SEE
Authors: John Curtin, MD; Sara Robinson, MD; Joshua D. Hartzell, MD, PS-HPEd
Institution: Walter Reed National Military Medical Center, Bethesda, MD

A 52-year-old man with a past medical history of diabetes and tobacco use presented to our hospital with complaints of malaise, severe low back pain, and loss of vision in the left eye. On presentation, he was afebrile but demonstrated a leukocytosis, elevated inflammatory markers, and a purulent infection of the left eye. Imaging of his lower back revealed the presence of a multilevel spinal epidural abscess and multiple paraspinous abscesses, and an electrocardiogram showed evidence of acute pericarditis. Blood cultures taken at admission returned positive for Streptococcus pneumoniae. Aspiration of vitreous fluid confirmed the diagnosis of endophthalmitis, with evidence of an intra-ocular Gram-positive infection that was initially treated with intravitreal antibiotics. Transthoracic and transesophageal echocardiograms were performed, which revealed the presence of a 2.1 centimeter tricuspid valve vegetation, consistent with bacterial endocarditis. An MRI of the cervical spine revealed the presence of osteomyelitis and discitis. The patient was started on broad spectrum antibiotics, followed by appropriate pathogen-directed therapy. During the course of his hospitalization, he underwent evisceration of the left eye due to corneal perforation, hemilaminectomy at multiple levels due to development of cauda equina syndrome, pericardiocentesis for development of a purulent pericardial effusion, pericardiectomy for developing constrictive pericarditis, and open heart surgery for excision of the tricuspid valve vegetation and tricuspid valve repair. He survived and was discharged to complete a prolonged course of intravenous antibiotics followed by an oral taper. Our case demonstrates an unusual and severe presentation of an otherwise common pathogen, and further illustrates principles of treatment of an extensive multi-organ system infection.

CV 90

BREAKOUT ROOM 9

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