High Yield Clinical Images in Internal Medicine

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Disclosures

I have no financial disclosures or conflicts of interest.
70 year old woman with diabetes who presents with four months of unintentional weight loss, abdominal pain and nausea...
Necrolytic Migratory Erythema

1. Rare skin eruption characterized by spontaneous eruptions and remissions
2. Can be intensely painful and pruritic
3. Commonly affects the intertriginous areas as well as the perineum and buttocks
4. Classic association with glucagonomas but can be seen with other malignancies as well
5. Definitive treatment for glucagonoma is resection and the rash usually resolves quickly after
6. For metastatic disease somatostatin analogues can provide relief
36 year old man with schizophrenia who presented with a Na of 105 mmol/liter...
1. Typically occurs in cases of overly rapid correction of hyponatremia but can also be seen in cases of overly rapid correction of hyperosmolar hyperglycemic syndrome
2. Goal Na correction should be 6-8 mmol/liter per day
3. Consider the DDAVP clamp in patient’s at high risk of overcorrection
4. Clinically can present as confusion, dysarthria, dysphagia to varying degrees of paresis, coma or even locked-in syndrome
5. Alcoholism and liver disease are predisposing factors
28 year old woman with anxiety who presents with palpitations...
Wolff-Parkinson-White Syndrome

1. Pre-excitation syndrome due to accessory pathway that bypasses the AV node
2. Accessory pathway can conduct anterograde (toward the ventricle) or retrograde (away from the ventricle) or most commonly in both directions
3. Usually short PR segment <120ms
4. Delta wave, slurred slow rise of the initial segment of the QRS
5. QRS prolongation, greater than 110ms
6. Treatment involves ablation of the accessory pathway
81 year old man with ESRD and chronic indwelling foley catheter...
Purple Urine Bag Syndrome

1. Benign finding that occurs in patients with highly alkaline urine due to degradation of indoxyl sulfate into indigo and indirubin by *Escherichia coli*, enterococcus species, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa*. 
72 year old man with 2 months of rectal bleeding and 20 lbs weight loss...
Leser-Trelat Sign

1. Rare paraneoplastic syndrome associated most commonly with gastrointestinal adenocarcinomas characterized by abrupt eruption of multiple seborrheic keratoses
2. Pathophysiology unclear but possibly related to overexpression of EGF-alpha and EGFR due to release of various cytokines from the underlying neoplasm
3. If there is concern that patient has the Leser-Trelat sign screening for an underlying malignancy is indicated
56 year old man with anemia and a GFR <30...
Raindrop Skull

1. Characterized by numerous “punched out” lytic lesions scattered throughout the skull
2. Associated with multiple myeloma
3. Named after the way rain hits a surface and subsequently splashes creating dark spots of various sizes
62 year old woman with dyspnea on exertion...
Spontaneous periorbital purpura aka Raccon Eyes

1. Commonly associated with amyloidosis and often AL amyloidosis
2. Due to vascular fragility from deposition of amyloid in capillary walls
3. Can be a clue to a bleeding diathesis in patients with AL amyloidosis especially those with an acquired Factor X deficiency
4. Check for macroglossia as well
47 year old man with alcohol use disorder found unresponsive in a field during winter with a temperature of 27 degrees C...
Osborn Waves

1. Positive deflection of the J point except for aVR and V1 which are negative
2. Most common in the precordial leads
3. Seen commonly in hypothermia but can be seen in a number of other conditions as well such as hypercalcemia and subarachnoid hemorrhages
4. Other EKG findings associated with hypothermia include atrial fibrillation, prolonged QT and progressive QRS widening
55 year old woman who works as an accountant presents with low grade intermittent fevers, joint pain and skin changes in her hands...
Hyperkeratotic fissured plaques aka Mechanic’s Hands

1. 30% of patients with antisynthetase syndrome will present with Mechanic’s hands
2. Treatment for antisynthetase syndrome includes glucocorticoids, hydroxychloroquine and azathioprine
3. Topical clobetasol, salicylic acid and emollients can be used to treat hands
4. The data regarding whether antisynthetase syndrome is associated with cancer or not is conflicting but patient should have age appropriate screening regardless
32 year old male sex worker with progressive dysphasia and altered mental status...
Herpes Simplex Encephalitis

1. Usually unilateral temporal lobe lesions
2. MRI is the most sensitive and specific imaging method
3. May see associated mass effects
4. Imaging findings portend a poor prognosis usually
84 year old man with fever, cough and dyspnea...
Spine sign

1. The opposite of the “more black sign”
2. Interruption of the increase in lucency of the vertebral bodies as one progresses from superior to inferior
3. Non-specific and can be due to anything that increases radiographic density
4. Given location and clinical presentation of this patient left lower lobe pneumonia would be high on the differential
28 year old man with fever...
Malaria due to Plasmodium falciparum

1. Classic signet ring shape of the early trophozoites
2. Multiple ring forms seen in P. falciparum
3. Gametocytes of P. falciparum are banana shaped whereas gametocytes of P. malariae are round and generally about the size of an RBC
4. RBCs infected by trophozoites of P. vivax are generally 1.5 times larger than uninfected cells
41 year old woman with fever after a tick bite...
Babesiosis “The Malaria of North America”

1. Intracellular erythrocyte inclusions without gametocytes or pigment
2. Associated with *Ixodes scapularis* tick bites
3. May see maltese cross formation of asexually budding merozoites which is essentially pathognomonic
38 year old man with foamy urine and leg swelling...
Oval Fat Bodies

1. Maltese cross seen under polarized light
2. Associated with the nephrotic syndrome
45 year old woman with hematuria...
Dysmorphic Red Blood Cells

1. Associated with glomerular bleeding
2. If 5% or more of the RBCs in the field examined are acanthocytes specificity for glomerular disease can reach up to 98%
3. Dysmorphic RBCs are thought to arise from mechanical trauma as cells pass through the damaged glomerular basement membrane as well as trauma from osmotic shifts in the nephron
53 year old man with hypotension...
1. Seen with pericardial effusions due to the swing of the heart in the fluid filled pericardium
2. Given patient’s hypotension cardiac tamponade is high on the differential
3. Check for a pulsus paradoxus which is defined as a drop in the systolic blood pressure by more than 10mmHg with inspiration
4. A pulsus paradoxus is even more sensitive and specific for hemodynamically significant cardiac tamponade than ultrasound
5. Patient will likely need emergent pericardiocentesis
64 year old man with chest pain...
Aortic dissection

1. Can be classified via DeBakey or Stanford classification systems
2. Stanford A affects the ascending aorta regardless of origin
3. Stanford B all others
4. Type A requires definitive surgical repair
5. Type B can occasionally be managed with medical treatment alone with careful blood pressure control
6. Endovascular repair is often the next step in Type B dissections once medical therapy has been tried
32 year old pregnant woman with hypotension and dyspnea...
Saddle Pulmonary Embolism

1. Given patient’s shock this would be classified as a massive PE
2. Systemic thrombolytics would be indicated and/or catheter based therapy (either clot retrieval or catheter directed tPA)
3. Submassive implies evidence of right heart strain as evidenced by TTE findings (D sign), EKG findings (right axis deviation, P pulmonale, S1 Q3 T3 pattern (not sensitive or specific however))
63 year old woman on peritoneal dialysis...
Calcific Uremic Arteriolopathy

1. Seen in patients with ESRD and caused by calcium deposition in the media of the dermo-hypodermic arterioles leading to infarction of the tissue that is supplied by these vessels
2. Can develop in people with a normal calcium-phosphorus product
3. Differential diagnosis includes warfarin induced necrosis, pemphigus foliaceus, cryofibrinogenemia, and nephrogenic systemic fibrosis
4. Management includes urgent hemodialysis to optimize calcium balance, intravenous sodium thiosulfate, wound care and pain management
83 year old woman with abdominal pain and unintentional weight loss...
Paraneoplastic Acral Vascular Syndrome aka Blue Toe Syndrome

1. Associated with adenocarcinomas and metastatic disease
2. Must rule out arterial thromboembolism, vasoconstrictive drug use or disorders, vasculitis and venous thrombosis
48 year old man with abdominal pain...
Chilaiditi Syndrome

1. Colonic interposition between the liver and diaphragm
2. Differential includes bowel obstruction, volvulus, intussusception, ischemic bowel, or inflammatory conditions (eg, appendicitis or diverticulitis)
3. Often misinterpreted as pneumoperitoneum but presence of haustra in the hepatodiaphragmatic space distinguishes this from free air
4. Conservative management consisting of bowel rest and pain control often is all that is needed
5. Nasogastric decompression and/or surgery is sometimes required
32 year old man with back pain...
Erythema ab igne

1. Commonly due to frequent application of heating pads
2. Differential includes livedo reticularis, SLE, antiphospholipid antibody syndrome
3. Patients may have a slightly increased risk of squamous cell carcinoma within the affected regions
4. Cessation of the heat exposure is first line treatment but creams and laser therapy can be tried for hyperpigmentation
Questions / Comments??