



12/27/21 Morning Report with @CPSolvers



Case Presenter: Kannu Bansal (@KannuBansalMD) Case Discussants: Thiago Mendes (@mendesthiagob)

CC: 26 yo with pain in both legs
HPI: acute onset of pain in his knees that spread to both his lower limbs. After 4 months of symptoms he had a fall and fractured his greater trochanter. Found to have Paget's disease upon further work up.
 No history of abd pain, no urinary symptoms, no vomiting, no neuro symptoms

Fam Hx: no Fam Hx of previous fractures in family, no hx of pancreatic cancer or MEN syndromes.
Soc Hx: no alcohol use, EtOH use. Patient of Indian descent.
Health-Related Behaviors: none
PMH: no PMHx
Meds: none
Allergies: NKDA.

Vitals: T: afebrile HR: 72 BP: 116/58 RR: 14 SpO₂: 98
Gen: a&ox3 HEENT: 3x3cm swelling seen on anterior aspect of right side of neck, 4 cm above the right clavicle extending laterally up to anterior border of SCM. Moving with deglutition, non-moving with tongue movement, no signs of fistula. No scars/sinuses. Non pulsatile, nontender in nature.
CV: nml **Pulm:** nml **Abd:** Nml **Neuro:** Nml
Extremities/Skin: no lymphadenopathy **MSK:** kyphoscoliosis with vertebral tenderness,

Notable Labs & Imaging:
 WBC: 7750 Hgb: 7.2 Plt: 286
 Na: 140 K: 3.4 Cl: BUN: 33 Cr: 2.05 glucose: Serum Ca: 18.2 Phos: 3.3
 Alk-P: 342 Albumin: 3.4 Vit D: 22.7 PTH: 839 (Normal 15-65) ESR 68
 CrP : 4.9(N<0.5) B12: 519 (197-77) Folate: 13.2 (3.1-17.5) Iron: 35 (59-158) Transferrin: 185 (200-360) Ferritin: 261 (30-400) TIBC: 48 (250-450)
 SPEP and UPEP: Negative **Hormone Profile:** TSH: 3.0 T3: 0.99 T4: 3.45 IGF-1: 186 iPTH: 2603 25-OH vit D: 39 S cortisol: 17.99 Prolactin 30.2
UA: RBC 8-10. WBC: 10-12, Prot/ketone/glucose - nml
Imaging: Areas of subperiosteal resorption and lytic lesions in multiple bones. Distal acro-osteolysis in fingers. Lytic lesions: brown tumors in metacarpals
Skull: salt and pepper skull, no lamina dura seen (floating teeth)
USG abdomen: Right kidney moderate hydronephrosis with multiple calculi in upper, mid and lower pole largest of 2.3 cm. Left kidney: multiple calculi, no hydro.
Sestamibi scan: Early 15 min image shows focus of increased tracer uptake in relation to lower half of right lobe of thyroid which persists on delayed 50 min image. Multiple foci of tracer uptake in B/L shoulder and B/L ribs
4DT scan: R inferior and posterior adenoma with some specks of calcification and necrosis with no enhancement on arterial phase with irregular border - 2.3 x 3 cm lesion. Diffuse osteopenia noted with tracer avid brown tumors in right parietal bone, left frontal bone, mandible, C6 vertebrae, left clavicle, B/L scapula, B/L humerii, sternum and multiple B/L ribs.
Thyroid Parathyroid Biopsy: solid cystic lesion with focal area of hemorrhage, composed of chief cells. No capsular invasion. Immunohistochemistry + for cyclin D1. **Final Dx:** Parathyroid Adenocarcinoma

Problem Representation: 26M p/w 4 months of b/l LE pain and femoral fracture after a fall. Physical exam is significant for a 3x3 cm R cervical mass. Labs showed anemia, hypercalcemia, high PTH. Imaging showed multiple renal calculi and subperiosteal resorption.

- Teaching Points (Vale):**
- Fractures after a fall: When to expect it? -> Great age (osteoporosis), great height.
 - Fractures in a young person: Risk factors include Tabaco, alcohol, low testosterone, chronic use of corticosteroids, 2ry hyperparathyroidism.
 - Paget's disease of the bone: Accelerated bone remodeling resulting in bone overgrowth.
 - Age of onset: >55 years.
 - Most ppl are asymptomatic, most common sx's are pain and skeleton deformities.
 - Lab findings: Elevated AlkP, Normal Ca & Phosphate. Hyperuricemia.
 - Cervical Mass: Lymph nodes, Trachea, Thyroid (if it's the case an US & TSH are a must!)
 - Liquid:
 - Solid: Biopsy
 - Suppressed TSH = Functional mass (hormone-producing): most likely benign.
 - Hypercalcemia -> Check PTH -> Elevated? -> 1ry hyperparathyroidism.
 - PTH can be elevated after a fracture, but not calcium!
 - Skull finding: Cotton wool -> Paget's dz. Salt & Pepper -> hyperparathyroidism.
 - Indications for qx: Age <50 yrs, Serum calcium >1 mg/dl above ULN, Fractures, Nephrolithiasis.