12/01/21 Family Medicine Morning Report with @CPSolvers

***Case Presenter**: Cindy Saenz (@CindySaenz15) Case **Discussants**: Gabriel (@gabrieltalledop) and Hans*

CC: 12yr old boy w/ sore throat, cough, severe knee pain

HPI: 12yr old boy w/ 3 days of sore throat, cough, severe knee pain (no trauma), polydipsia. 1 day fever and vomiting.
Knee pain started suddenly, comes and goes, from mid thigh to mid calf, worst in thigh and knee; limping for 3 days because of pain, finds hard to straighten leg.
Denies: HA, rhinorrhea, diarrhea, dysuria, foul smelling urine, blood in stool or urine, back pain, sexual activity.
Drinking 6-7 8oz water bottles/day, urinating 4 times/day

PMH:
No recent illnesses
Hypothyroidism
Asthma
Meds: none

Fam Hx: -
Soc Hx: Housed, lives with parents
Health-Related Behaviors:-

Allergies: -

Vitals: **T**: 38.5 **HR**: 145 **BP**: 113/56 **RR**: **SpO_2**: 96%
Exam:
Gen: Alert, active, well appearing
CV: Tachycardic, regular rhythm **Pulm**: CTAB **Abd:** Unremarkable
Extremities/Skin: Cap refill <2 seconds. Left knee slightly swollen, no erythema, no lesions except scattered small bug bites on both legs, w/o surrounding infection. Left knee pain to palpation, but distractible during joint examination. Pain superior to the knee (lower thigh) persists despite attempts at distraction. Pain w/ extension of leg, difficult to bear weight, no effusion.

Notable Labs & Imaging:
Hematology: WBC: 11.9 Hgb: 12.2 Plt: 344
Chemistry:
Na: 134 K: 3.7 Cl: 101 CO2: BUN: 11 Cr: 0.68 Ca: normal Liver Function Tests: normal TSH: 9.7 T4: normal CK: Normal ESR: 65 CRP: 148 ANA: negative C3 and C4: normal GCCT: negative Strep antigen: Negative Antistreptolysin O: normal
UA: No glucose, trace ketones, no leukocytes or nitrites, 6-10 RBC, 2-5 WBC, moderate hyaline casts
Vitals + Exam:
T: Afebrile **HR:** 102
Extremities: Otherwise normal left knee, faint erythema on thigh, pain w/ leg extension, difficulty bearing weight, limping, TTP worst at back of knee and thigh muscle superior to the knee.
Imaging + Labs:
XR Knee, femur: Unremarkable US LLE: no DVT
Blood cultures: MSSA
MRI femur: Osteomyelitis of the left distal femoral metaphysis w/ adjacent subperiosteal abscesses and additional rim enhancing abscesses in the surrounding musculature

Final diagnosis: Osteomyelitis

Problem Representation: 12 yr old boy w/ sore throat, cough, acute knee pain, polydipsia, fever and vomiting. Found to have swollen and painful knee and small bug bites on both legs on PE. BCx positive for MSSA.

Teaching Points (Rafa):

- **12yo BOY W/ SORE THROAT, COUGH, AND SEVERE KNEE PAIN**
  Infections
  Viral (post-infection), bacterial (Streptococcus pyogenes)
  Good to check the immunization status
- **POLYDIPSIA**
  Primary or Psychogenic polydipsia - more common in patients with psychiatric diseases
  Secondary - diabetes mellitus and insipidus, hypovolemia, increased osmolarity
- **KNEE PAIN**
  Trauma?
  Associated with fever - infection? Malignancy (osteosarcoma? Autoimmune (having one autoimmune disease predispose to others) ? Drugs? Endocrinopathy?
  Think about do not miss diagnosis
  Septic arthritis (especially with the difficult to bear weight)
  Microorganisms can enter the joint space by hematogenous spread, direct inoculation, or extension of a contiguous focus of infection (eg, osteomyelitis).
- **OSTEOMYELITIS**
  In children, acute osteomyelitis is primarily hematogenous in origin.
  Important to look for a source of the bacteremia!
  Leukocytosis is variable and nonspecific
  Elevations in the ESR and CRP are more consistently observed in children with hematogenous osteomyelitis