03/25/24 Morning Report with @CPSolvers

*"One life, so many dreams" **Case Presenter**:Dr. Appledene Osbourne **Case Discussants**: Dr. Lianne Gensler (@LianneGensler) and Madellena Conte (@MadellenaC)*

CC: 40 yo M referred to rheumatology clinic for intermittent polyarticular joint pain in bilateral feet, left knee, left hand, and left ankle

HPI: 1 y ago → traumatic injury to R-knee → pain, effusion, instability → medial meniscus tear →denied arthroplasty → physical tx + NSAIDs → symptoms resolved. // 2 months ago → Mild stiffness, camping trip → Self limiting GI illness w/ N,V,D, but no hematochezia. Pain in L-knee, L-ankle, intermittent tenderness @plantar surface of bilateral feet, pain in multiple toes, L-2nd MCP joint. Occasional bilateral neck, shoulder stiffness. Joint pain worse in the A.M. improves during the day, Naproxen at bedtime helpful, misses the dose → morning stiffness in the back specifically.

ROS: No hx of eye pain, redness, or fusiform swelling of digits. Intermittent pain in elbow & achilles, no rash of hx of psoriasis, IBD, chronic diarrhea. Has fatigue, denies chills, night sweats, dry eyes, oral ulcers, dysphagia or genital lesions. Left-sided jaw pain in the A.M. no chest pain or SOB, no depressive symptoms.

PMH: None. Remote tonsillectomy .

Meds: Naproxen.

Fam Hx: No family hx of psoriasis, IBD.

Soc Hx:

Health-Related Behaviors: Occasional alcohol, no tobacco.

Allergies: None.

Vitals: T: 98 **HR: 80 BP:** 140/80 **RR:** 18 SpO2: 99 % on RA.

Exam:

Gen: No acute distress

HEENT: No conjunctival or scleral injection. RRR. Pain w/ palpation of L-TMJ. No cervical LAP.

CV: RRR. peripheral pulses palpable. // **Pulm:** Wnl. **Abd:** Normal. Nondistended, nontender. **Neuro:** normal strength sensation intact, no petechiae, purpura, nail putting, or dystrophy.

Extremities/skin: Cervical spine w/ normal ROM, non tender. Shoulders w/ normal ROM. Elbow: mild tenderness on L-lateral epicondyle. MCP, DIP, PIP: no swelling, tenderness. R-knee: small effusion, mild tenderness, reduced ROM, mild warmth. L-knee moderate effusion, mild warmth, no erythema, L-ankle: Effusion, reduced ROM, tenderness, warmth. Tenderness at the insertion of Achilles to calcaneus. Modified Schober's test: increased distance >5 cm w/ forward flexion. Occiput to wall test normal.

Notable Labs & Imaging:

Hematology:
CBC normal w/ diff. Normal BMP, RFT, LFT. ESR: 92 CRP 42. RF - , CCP -, (+) HLA B27, HBV, HCV, HIV, Quantiferon (-).

Chemistry: BMP, LFT, renal function wnl.

Imaging:
Past knee MRI (1 y ago): Medial meniscal tear, large joint effusion, ruptured popliteal cyst. Knee X-ray: Mild medial compartment degenerative changes in knees. Ankle & foot X-ray: wnl. Cervical spine X-ray: degenerative changes w/o vertebral body squaring or syndesmophytes. Sacroiliac joint X-ray: No erosion or sclerosis to suggest sacroiliitis.
MRI of sacrum: BM edema around the superior + anterior SI joint L>R. Mild L>R fatty metaplasia along the superior sacral sides of the iliac joints, no evidence of sclerosis, or ankylosis in the bilateral upper and lower SI joints. Lumbar spine: no inflammatory lesions, vertebral body squaring.

Dx: Axial spondyloarthritis w/ peripheral arthritis (Tx: NSAIDs, sulfasalazine, eventually TNF-inhibitor → Eventually switched to IL-17 inhibitor. Has been doing well).

Problem Representation: A 40 y/o M w/ prior traumatic R-knee injury 1y ago, and self limiting GI illness 2 months ago, referred to rheumatology w/ intermittent polyarticular joint pain in both small and large joints especially in the A.M. Pain is alleviated by NSAIDs. Physical exam shows enthesitis, large joint arthritis and labs revealed high ESR, CRP, and HLA-B27 (+).

Teaching Points (Ximena):

-A starting point can be differentiating between inflammatory vs degenerative disease.

Inflammatory pain: worse in the morning, morning stiffness that lasts 30-60 min. Imaging can determine inflammatory axial disease.

Degenerative disease: can be primary like osteoarthritis that involves hips and knees. It can be secondary like CPPD and gout (crystal disease).

Rheumatoid arthritis: It causes small joint involvement in the hands. It doesn't affect the back. Large joints can be involved but it's unusual. LES can be associated.

Psoriatic arthritis: Usually has peripheral involvement in elbows, knees associated w/rashes in groin or genital area. Other prominent symptoms is nail involvement manifesting as onycholysis. Evaluation should be in the hands, not toes due to onychomycosis being commonly present. BMI of patients is usually on the upper end. X-R finding of new bone formation is very sensitive. Usually the psoriasis is developed many years before the arthritis. Inflammatory markers are not helpful because a high percentage of patients can have normal labs.

Reactive arthritis: Very inflammatory, not insidious disease that typically affects peripheral joints but can also involve axial joints. It can cause extramuscular manifestations like uveitis, rashes, and oral ulcers. The GI illness associated it usually causes dysentery.

Spondyloarthritis: Family of diseases that affect the back (axial) + other joints (peripheral). Usually affect big joints producing sacroiliitis, and peripherally, it can cause synovitis, enthesitis and dactylitis. BMI of patients is usually on the lower. It is very responsive to NSAIDs. They can also have significant disease on X-ray, but not necessarily if the disease hasn't caused evident damage yet. However, inflammation can be seen on MRI.

Physical Exam Pearls: The physical exam can help narrow the differential more quickly. To assess mobility in lumbar spine, we can perform the lateral lumbar flexion test, which consists on measuring from the basal standing position to maximal lateral flexion. It is normal to have >10 cms, if less we can suspect an axial inflammatory process.
Usually we don't see active uveitis but we can evaluate past inflammation through the formation of sinechia. They make the pupil border irregular. Enthesitis can be evaluated by applying (pressure on bone insertion and patient should report tenderness on the area.

Radiologic Pearls: Consider the timing of the tests because X- ray evaluates damage, but sometimes the damage hasn't happened yet. So, consider performing an MRI to detect inflammation. AP pelvis helps to identify damage on sacroiliac joint. If X-ray is normal, perform a pelvic MRI. Inflammation signs on X-ray associated w/ peripheral arthritis are erosion, narrowing of joint space, and new bone formation.

Medication Pearls: For axial spondyloarthritis you can consider NSAIDs as first line like Naproxen. Other medications may include sulfasalazine, which is more effective for synovitis, while NSAIDs are better for enthesitis. The biological agents that can be used are TNF inhibitors or Il-17 inhibitors. TNF can cause paresthesias (neurologic symptoms) as a side effect.