Cases and Mimics in Axial Spondyloarthritis

Lecturer: Dr. Lianne Gensler

AxSpA Mimics:

- **Disease activity itself**
  - Inflammatory back pain is neither sensitive nor specific
  - Bone marrow edema on MRI has its own differential diagnosis (previously thought to be specific to sacroiliitis)
  - CRP (the only serologic biomarker of disease activity) is neither sensitive nor specific

- **Infectious complications**
  - Osteomyelitis: especially patients on immunosuppressive therapy for IBD (i.e., fistulization to the presacral space with sacral osteomyelitis), associated with IBD activity
  - Septic sacroiliitis: bacteremia (especially *Staph*), post-partum state, mycobacterial species, *Brucella*
    - Pearl: Many patients do not have a fever, about 1/3 have no risk factors for disease

- **Sacral insufficiency fractures**: especially in post-partum patients

- **Osteitis condensans ili**: especially in post-partum or obese patients

- **Malignancy**: especially hematologic malignancies (i.e., ALL), bone tumors (i.e., osteoblastoma)

**Imaging**

- MRI can confirm the diagnosis in the appropriate clinical setting, provide details about disease activity and structural damage, predicts response to biologic treatment, and can reveal alternative diagnoses
  - Optimal MRI sequences: T1 and STIR
    - T1: fat sensitive sequence → best for structural change, ankylosis, fat metaplasia, erosions
    - STIR: fluid sensitive sequence → best for inflammation, bone marrow edema
  - Use incidental imaging when available (i.e., patients with IBD get frequent imaging that often includes the SI joints)

**Disease Management:**

- Think about what drugs your IBD/psoriasis patients are on → does the med also control joint disease?
  - TNFi are the only class of drugs that can treat both IBD and AS
  - Ustekinumab: no efficacy in AS

- Some patients can achieve remission with NSAIDs alone, recommend starting here unless there is a contraindication
  - If a patient has hard-to-control uveitis, then consider starting with a biologic

- There are no JAK inhibitors currently approved for axSpA
  - Tofacitinib: phase II study was positive, phase III study undergoing now (note that while it is approved for UC, it is not approved for use in Crohn’s)
  - Upadacitinib: approved for RA, phase III data for Crohn’s is promising, phase II data for AS is promising
  - Filgotinib: promising phase II data

- TNFi failure: always ensure the patient is failing for the right reasons (i.e., is the drug being taken the right way, is the diagnosis correct, is there a second process causing symptoms)
  - If primary non-responder: low likelihood of responding to another drug in the same class → consider switching class
  - Do not combine biologics

**Q&A Pearls:**

- Physical exam may not reveal MSK abnormalities in axSpA (especially in early disease)
- Most useful physical examination maneuver for diagnosis: lateral flexion, forward flexion
- Most useful physical examination maneuver for monitoring: cervical rotation, occiput-to-wall
- Sclerosis around the SI joints is non-specific
- Consider the probability of disease in each patient → highest LRs for anterior uveitis, HLA-B27+ (*Rudwaleit M, Ann Rheum Dis* 2006)