Spondyloarthropathies

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Objectives

- List the 4 Spondyloarthropathies
- Define the terms: oligoarticular, enthesitis, uveitis, iritis, conjunctivitis
- Describe clinical and immunologic characteristics that are common to all Spondyloarthropathies
- Describe the differences between Spondyloarthropathies and Rheumatoid Arthritis

The 4 Spondyloarthropathies

- Ankylosing Spondylitis
- Psoriatic arthritis
- Reiter’s/Reactive arthritis
- Inflammatory Bowel Disease-associated arthritis

Spondyloarthritis

Definition:
Spinal and peripheral joint oligoarthritis, inflammation of ligaments and tendons to bone, and associated mucocutaneous, ocular and cardiac manifestations

- Oligo = “few” = 1-4 joints
- Spondylos = vertebra
- Arthron = joint
- Itis = inflammation

Terms You Need to Know

- Oligo = pauciarthritic arthritis
  - One to four joints involved
- Enthesitis (vs synovitis)
  - Inflammation where tendon inserts on bone
- Dactylitis
  - Inflammation of an entire digit
- Erythema Nodosum
  - Painful red nodules appearing mostly on the shins
- Pyoderma gangrenosum
  - A pyogenic skin disease that causes tissues to become necrotic and leads to deep ulcers

Disclosures: none
Uveitis
- Inflammation of the uvea, the part of the eye that collectively refers to the iris, the choroid of the eye, and the ciliary body

Iritis (anterior uveitis)
- Inflammation of the iris, the pigmented portion of the eye surrounding the pupil

Conjunctivitis
- Inflammation of the membrane that lines the eyelids and covers the surface of the eyeball

HLA-B27
- HLA-B27: Human Leukocyte Antigen Class I (MHC I)
  - Prevalent among certain groups:
    - North American Caucasians 7%
    - European Caucasians 20%
    - African-Americans 1-2%

- Who is HLA-B27 positive?
  - 95% of patients with European ancestry with ankylosing spondylitis
  - 70% with reactive arthritis
  - 60% with psoriatic spondylitis
  - 25% with peripheral psoriatic arthritis
  - 70% with IBD associated spondylitis
  - 50% with anterior uveitis

- BUT fewer than 5% of HLA-B27 positive pts ever develop a spondyloarthropathy
  - "seronegative"

Ankylosing Spondylitis: Clinical Features

- Skeletal
  - Axial arthritis, such as sacroiliitis and spondylitis
  - Arthritis of the "girdle joints" (hips and shoulders)
  - Peripheral arthritis is uncommon
  - Other: enthesopathy, vertebral fractures, osteoporosis

- Extraskeletal
  - Acute anterior uveitis (iritis)
  - Cardiac involvement (aortic insufficiency, aortitis, conduction abnormalities)
  - Pulmonary (decreased chest wall expansion; slowly progressive fibrosis occurs late)
  - Neurologic (spinal cord compression/ cauda equina syndrome)
Psoriatic Arthritis

- Inflammatory arthritis that associates with psoriasis
- Peripheral polyarthritis, frequently symmetrical
- Asymmetrical spondylitis and sacroiliitis
- Dactylitis (sausage digits)
- “Arthritis Mutilans” associated with telescoping of fingers is characteristic but uncommon.
- Ocular involvement occurs (conjunctivitis, iritis)
- Enthesitis as with other spondyloarthropathies

"Bamboo Spine" – syndesmophytes or ossification of annulus fibrosus
DIP involvement
Psoriatic Arthritis differs from Rheumatoid Arthritis in all of the following ways EXCEPT:

A. Psoriatic arthritis can involve the DIP joint, whereas RA does not
B. Psoriatic arthritis involves proliferative changes on Xray in addition to erosive changes
C. Psoriatic arthritis is associated with enthesitis, whereas RA is not
D. Psoriatic arthritis is associated with scleritis, whereas RA is associated with uveitis

Reactive Arthritis
Clinical Features

- Most common in young adults
- Equally frequent in males and females
- Sterile joint inflammation that develops after an infection
- Systemic disease, not limited to the joints
- Occur after throat, GU and GI infections including Chlamydia, Salmonella, Shigella, Campylobacter, Yersinia, and C. difficile
- Arthritis (ranges from mild to disabling disease)
- Enthesopathy, tendonitis, tenosynovitis, osteitis, and muscle pains
- Skin (keratoderma blennorrhagicum, circinate balanitis) and mucous membrane lesions
- Eye inflammation (uveitis, conjunctivitis)
- Spontaneous recovery common; prognosis generally good
- Recurrences do occur
IBD-Associated Arthritis

Clinical Features

- Arthritis associated with Crohn's Disease and Ulcerative Colitis
- Joint involvement
  - Peripheral
    - Pauciarticular, mostly asymmetrical
    - Joint activity often parallels bowel disease
    - Enthesopathies common
  - Axial
    - May be identical to AS
    - Joint activity does not parallel bowel disease
- Extra-articular Features
  - E. nodosum/pyoderma, uveitis
Culture of this wound is likely to grow which of the following organisms?

A. Staphylococcus aureus  
B. Salmonella  
C. Group A Strep  
D. Haemophilus influenza  
E. Sterile culture

Diagnosis of Spondyloarthropathy

Diagnosis

- History and Physical Exam are critical
  - Schober’s Test
  - No specific diagnostic tests
  - Supporting laboratory findings:
    - Elevated ESR, CRP
    - Anemia of Chronic Disease
    - Sacroiliitis on Imaging

Distinguishing Spondylo from RA

- Look at the joints involved:
  - Spondylo affects DIP joints and spine
  - RA spares DIP joints, does not affect spine
- Look for extra-articular manifestations:
  - Spondylo associated with uveitis, enthesitis, skin findings
  - RA associated with scleritis
- Look at the X-rays:
  - Spondylo shows proximal erosions and bone resorption, with distal "exuberant" bone formation
  - RA shows peri-articular osteopenia and both proximal and distal bone erosions
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C. Psoriatic arthritis is associated with enthesitis, whereas RA is not
D. Psoriatic arthritis is associated with scleritis, whereas RA is associated with uveitis

Answer: D – PsA is associated with uveitis; RA is associated with scleritis
Culture of this wound is likely to grow which of the following organisms?

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B. Salmonella  
C. Group A Strep  
D. Haemophilus influenza  
E. Sterile culture

Answer: E- sterile culture; this patient has pyoderma gangrenosum