SERONEGATIVE SPONDYLOARTHROPATHIES

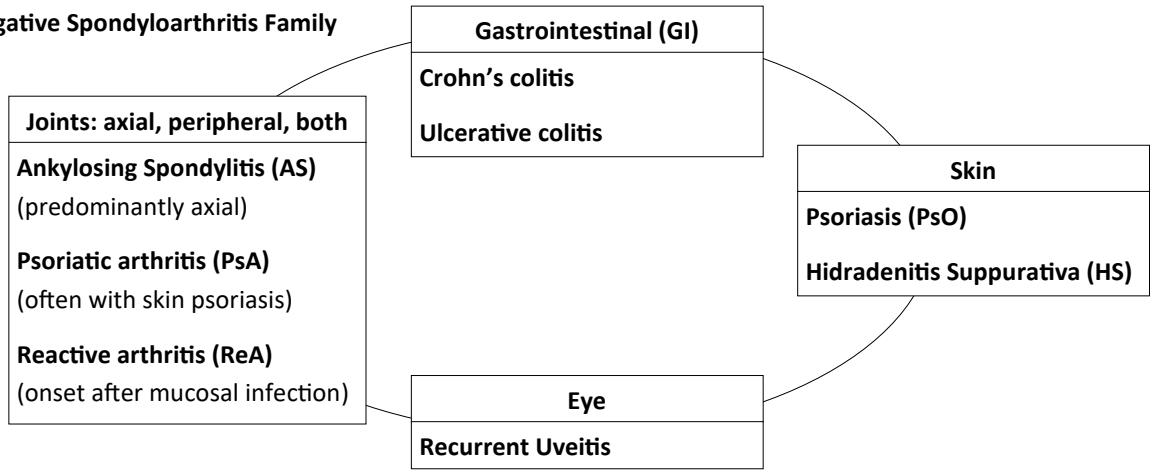
BOTTOM LINE

Seronegative spondyloarthropathies (SpA) are a ***family*** of related diseases affecting skin (psoriasis), eyes (uveitis), GI (Crohn's/ colitis), and joints. Joint manifestations include inflammatory back pain or asymmetrical lower-limb predominant peripheral arthritis, enthesitis, and dactylitis.

Overview

- Seronegative spondyloarthropathies (SpA) is an umbrella term referring to a family of related diseases which can occur **alone or together** as a spectrum within a single patient.
- SpA diseases affect various tissue "domains":
  - Joint: axial arthritis, peripheral arthritis, enthesitis, dactylitis
  - Gut: inflammatory bowel disease (Crohn's, Ulcerative Colitis)
  - Skin: Psoriasis (PsO), Hidradenitis suppurativa
  - Eye: uveitis

The Seronegative Spondyloarthritis Family



Term	Definition
Seronegative	No antibodies are positive (ex: negative for RF, ACPA, ANA, etc.)
Axial arthritis	Vertebral column, sternoclavicular, costochondral, sacroiliac joints
Peripheral arthritis	All other joints (hands, elbows, shoulders, hips, knees, ankles, feet)
Enthesitis	Inflammation at insertion of tendons (ex: Achilles enthesitis, tennis elbow, golfer's elbow); seen in healthy individuals, but can happen more frequently in spondyloarthropathies
Dactylitis	"Sausage-like" swelling of entire finger or toe; hallmark of SpA

Implications

- Clinically: a good clinical assessment of a SpA patient will include a review and exam focusing on symptoms and signs of the above related diseases
- Therapeutically: many of the above disease can respond to similar treatments. Treatment challenges occur when one disease domain may improve, but another worsens on a particular DMARD.

Treatment

- Pathophysiology of SpA involves common cytokines which may be expressed in a hierarchical order of importance, depending on the tissue domain:

Skin	IL-17, IL-23p19, IL-12/23p40, TNF
Peripheral Joints	TNF, IL-17, IL-23p19, IL-12/23p40
Axial Joints	IL-17, (IL23?)
Enthesitis	IL-17, IL-12/23p40, TNF, IL-23p19
Intestinal lumen	TNF, IL-12/23p40, IL-23p19

- Thus, targeted advanced SpA treatments may include PDE-4 inhibitors (affects TNF and IL23), TNF-inhibitors, IL-17 inhibitors, IL-22 inhibitors, IL-12/23 inhibitors
- Choosing a targeted therapy in a SpA patient often depends on which predominant tissue domain (and therefore which cytokine targets) are involved in the patient's disease

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