Seronegative Spondyloarthropathies

Axial and peripheral SpA · inflammatory back pain, why the conventional DMARDs fail axially, and the IL-17 trap in IBD

Back pain that *improves with use*

THE FAMILY *one shared biology, four clinical faces*

AXIAL SpA

Includes **ankylosing spondylitis** (radiographic) and **non-radiographic axial SpA**, which is the same disease before structural change is visible on plain film. **Strongly HLA-B27 associated.**

PSORIATIC ARTHRITIS

Peripheral, axial, or both. **DIP involvement and dactylitis** distinguish it from RA, along with nail pitting and onycholysis. **Skin disease usually precedes the arthritis**, so ask about it and look at the scalp, navel and gluteal cleft.

REACTIVE & IBD-RELATED

Reactive arthritis follows GU or GI infection by 1 to 4 weeks (chlamydia, salmonella, shigella, campylobacter, yersinia). **Enteropathic arthritis** accompanies Crohn disease and ulcerative colitis; **peripheral disease tracks bowel activity, axial disease does not**.

INFLAMMATORY BACK PAIN *the pattern that should trigger the whole workup*

Feature	Why it separates from mechanical back pain
Onset before age 45, insidious, lasting **more than 3 months**	Mechanical pain is usually acute and self-limiting. **Chronic back pain starting in a young adult is the group to think about**, and it is routinely dismissed for years
Morning stiffness over 30 minutes	Reflects inflammation rather than degeneration
Improves with exercise, NOT with rest	**The single most discriminating feature.** It is the reverse of mechanical pain, and patients often describe pacing the house at night
Night pain, especially second half of the night, and **alternating buttock pain**	Night pain that wakes the patient and eases on getting up points to sacroiliitis
Look beyond the spine	**Enthesitis** (Achilles, plantar fascia), **dactylitis**, **anterior uveitis**, psoriasis, IBD, and a family history. **Good response to NSAIDs** is itself a supportive feature

INVESTIGATION *the imaging point that changes practice*

Test	What it is for
MRI of the sacroiliac joints the key test	**Detects active sacroiliitis as bone marrow edema years before plain radiographs change.** Because radiographic damage takes years, **a normal pelvic radiograph does not exclude axial SpA**, and relying on it is the main reason diagnosis is delayed by many years. Use STIR sequences
HLA-B27	Supportive, not diagnostic. **Common in the healthy population and absent in many patients**, so it shifts probability rather than deciding. Most useful when the clinical picture is already suggestive
CRP and ESR	Often **normal despite active disease**, particularly in axial SpA, so normal inflammatory markers must not be used to dismiss the diagnosis. When raised, they help track response
Screen the associations	Ask about **uveitis, psoriasis and bowel symptoms** in everyone, since these change both the diagnosis and the drug choice

TREATMENT *where axial and peripheral disease part company*

Step	Detail
NSAIDs plus exercise	**First-line for axial disease**, at full dose and given an adequate trial of two agents. **Physiotherapy and regular exercise are disease-modifying here**, not adjunctive comfort measures: posture and spinal mobility are what is being preserved
⚠ Conventional DMARDs do NOT work axially	**Methotrexate and sulfasalazine are ineffective for axial disease**, which is the crucial difference from rheumatoid arthritis. They retain a role in **peripheral** arthritis, and sulfasalazine is the usual choice there. **Prescribing methotrexate for back pain in axial SpA wastes months**
Biologics for inadequate response	**TNF inhibitors or IL-17 inhibitors** for persistently active axial disease despite NSAIDs. Both are highly effective. In psoriatic arthritis the options are broader, including IL-12/23 and IL-23 agents and JAK inhibitors
⚠ Let the comorbidity choose the biologic	This is where marks are won. **With inflammatory bowel disease, use a monoclonal TNF inhibitor: IL-17 inhibitors can trigger or worsen IBD**, and etanercept is ineffective for IBD and for uveitis. **With recurrent anterior uveitis, prefer a monoclonal TNF inhibitor** for the same reason. With prominent psoriasis, IL-17 and IL-23 agents are particularly effective
Screen before starting	**Latent TB and hepatitis B** before any biologic, vaccines updated beforehand, and **live vaccines avoided** once treatment has started
Do not use systemic steroids for axial disease	Unlike rheumatoid arthritis, **systemic glucocorticoids have little role in axial SpA**. **Local injection** into a sacroiliac joint or an enthesis is useful, and in psoriatic arthritis systemic steroids risk **rebound pustular psoriasis on withdrawal**

The long-term comorbidities are easy to overlook in a young patient who feels well between flares. Osteoporosis is common despite the appearance of increased bone density on films, since syndesmophytes mask true vertebral bone loss and fractures are then missed. **Cardiovascular risk is raised** by chronic inflammation, so screen and treat it actively. Longstanding uncontrolled disease can also cause **secondary AA amyloidosis**, and aortic root disease with conduction block is a recognized association.

PEARLS & PITFALLS

- **Acute anterior uveitis is a medical emergency for the eye.** A painful red eye with photophobia in a spondyloarthropathy patient needs **same-day ophthalmology**, not a delayed clinic appointment. Warn every patient about it at diagnosis.
- **The fused spine fractures easily and unstably.** In advanced ankylosing spondylitis, **even minor trauma can cause an unstable fracture**, often at the cervicothoracic junction, and it is **easily missed on plain films**. Have a low threshold for CT, and take new neck pain after any fall seriously.
- **Do not force the neck in a fused spine during intubation**, and anticipate a difficult airway. Restricted chest wall expansion can also cause a **restrictive pattern** on pulmonary function testing.
- **Reactive arthritis is not treated with antibiotics for the arthritis itself**, though the triggering infection is treated if still present. It is usually self-limiting over months, and NSAIDs are the mainstay.

References: ASAS classification criteria for axial and peripheral spondyloarthritis · ACR/SAA/SPARTAN recommendations for ankylosing spondylitis and non-radiographic axial spondyloarthritis · GRAPPA recommendations for psoriatic arthritis.