Spondyloarthropathies

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Spondyloarthropathies:

A group of related inflammatory joint disease, overlap in their clinical features sharing immuno-genetic association with HLA-B27.These include:

-Ankylosing spondylitis AS

-Axial spondyloarthritis

-Psoriatic arthritis

-Reactive arthritis

-Arthritis associated with inflammatory bowel diseases.

Common criteria:

1- Asymmytrical inflammatory Oligoarthritis.

2- Sacroiliitis and inflammatory Spondylitis.

3- Inflammatory Enthesitis.

4-There is a striking association with HLA-B27 particularly in AS >95% and Reiter disease 90% and when there is sacroiliitis , uveitis or balanitis .

5-Tendency for familial aggregation.

6- Overlapping of extra- articular features.(as aortic root fibrosis, (aortic incompetence, conduction defects), uveitis ,conjunctivitis and psoriasis of skin or nail , sterile, inflammatory bowel disease ,urethritis , prostatitis)

7-History of inflammatory back pain

The etiology still not clear .but could be an abnormal response to infectious organism in genetically susceptible individual.

In reactive arthritis the triggering organism can be identified.

In other disease in the group the environmental triggers remain unknown.

Axial spondyloarthritis

- Inflammatory low back pain and early morning stiffness.
- The pain radiated to buttock or posterior thigh.
- Symptoms are exacerbated by inactivity and relieved by movement
- Enthesitis :episodic local or wide spread
- Fatigue
- Association of inflammatory bowel disease or psoriatic skin or nail lesions(current, past or first degree relatives).

Physical examination

Reduced range of spinal movement in all directions

Tenderness on stressing sacroiliac joints

Pain and tenderness at enthesitis sites (Achilles' insertion, plantar fascia origin, patellar ligament entheses,

gluteus medius insertion at the greater trochanter and tendon attached to humeral condyles)

Disease activity assessment :

- Bath Ankylosing Spondylitis Disease Activity Index (BASDAI)
- Bath Ankylosing Spondylitis Functional Index (BASFI) .
- Ankylosing Spondylitis Disease Activity Score (ASDAS-CRP).
- Assessment of Spondyloarthritis International Society Health Index (ASAS-H).

Investigations:

- MRI for detection of early sacroiliitis.
- MRI and ultrasound for detection of enthesitis
- Acute phase reactant ESR , CRP elevated in active inflammation but could be normal.
- Anemia and positive HLA B27.
- Calprotectin for screening of inflammatory bowel disease.

Management :

- Education
- NSAIDs
- Physical therapy
- In severe or persistent peripheral involvement sulfasalazine and methotrexate should be considered(these medications have no influence on spinal symptoms or disease progression).
- In severe cases or inadequate response or intolerance to NSAIDs, biologic therapy Anti TNF or IL-17 A inhibitor(seckinumab) should be considered.

Ankylosing Spondylitis

Is characterized by chronic inflammatory arthritis mainly affecting sacroiliac joints and the spine leading to progressive bony fusion of the spine.

- Peak incidence in 2nd and 3rd decades, with male to female ratio 3/1.
- More than 90% associated with HLA-B27.
- Etiology it is though due common environmental pathogen in genetically susceptible individual, although no specific trigger pathogen has been isolated.
- Chronic prostatitis is common than usual in men but it is no infective in nature. Increased fecal carriage of Klebseilla aerogenese in AS and could related to joint and eye exacerbation.

Clinical Features:

- Clinical features are the same as in axSpA . AS evolve slowly from Axial SPA
- Spine become ankylosed rigid with secondary osteoporosis, predispose to fracture. Spinal cord compression is rare.
- The extent of spinal fusion differ in severity in most cases not cause marked flexion deformity, but in few cases marked kyphosis of dorsal and cervical spine kyphosis which may interfere with forward vision.
- Plueritic chest pain aggravated by breathing result from costo-vertebral joint involvemet can

- Pain due inflammation at the site ligament or tendon insertion (enthesitis)as plantar fasciitis, Achilles tendonitis.
- Fatigue is often a major complaint due to interrupted sleep and due chronic inflammatory processes .
- Peripheral arthritis (40%) Like hips, knees, ankles or shoulders. It could antedate the spinal symptoms(10%)
- Anterior acute uveitis is a common extra skeletal features and my precedes the joint disease.

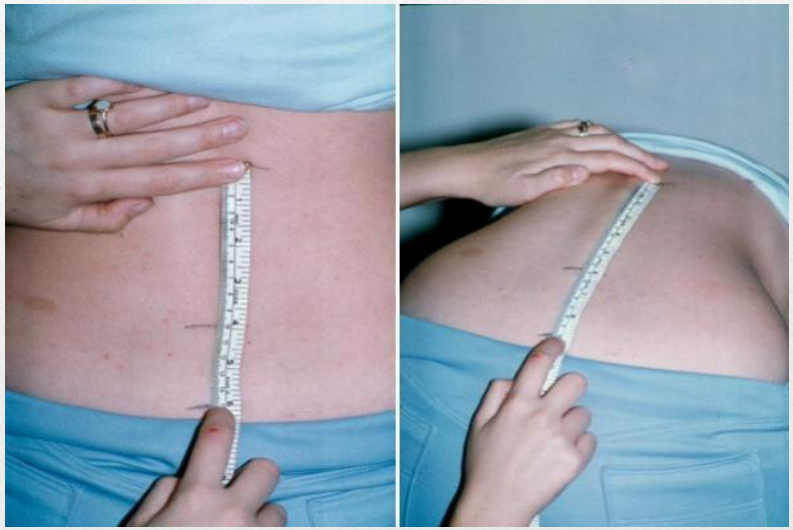
Physical examination:

- +ve schobber test.and restriction of spinal movement in all directions.
- Pain on SIJ stressing

or compression

- Restriction of chest

expansion.



- Local tenderness at the site of active enthesitis.
- Sign of peripheral arthritis when exist.

PHYSICAL EXAMINATION

Figura 4. Distancia occipucio-pared.

igura 5 a. Medida de la
istancia trago -pared.

igura 1. Flexión

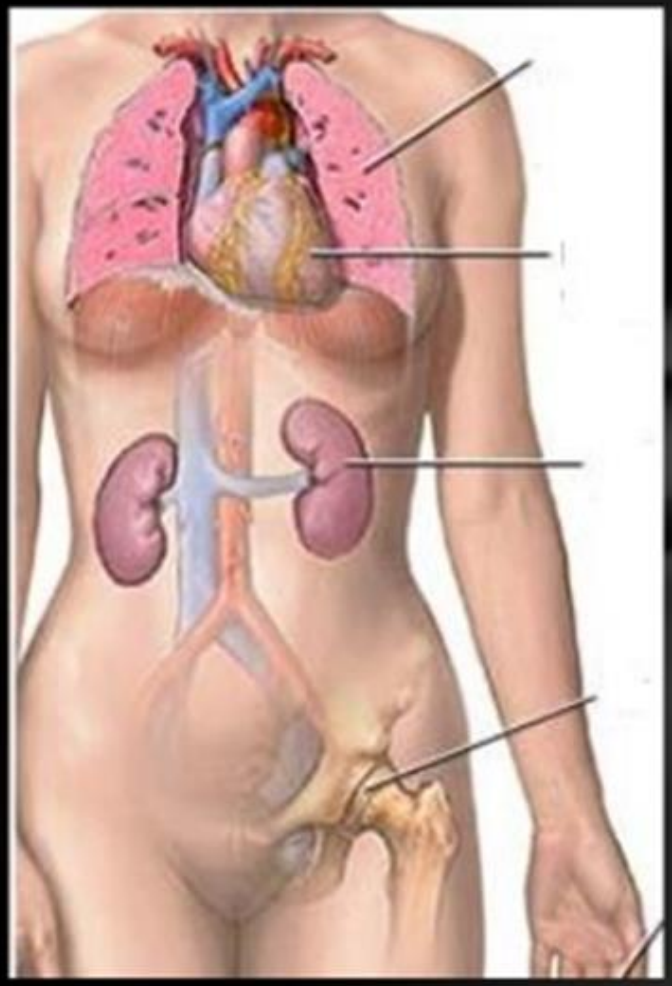
Extra-articular features of axial spondyloarthritis and ankylosing spondylitis :

1. Fatigue, anaemia
2. Inflammatory bowel disease (up to 50% have IBD lesions)
3. Anterior uevitis 25%, and conjunctivitis 20%.
4. Prostatitis in about 80% in men usually asymptomatic.
5. Cardiac(aortic and mitral incompetence, conduction defect , pericarditis).
6. Amyloidosis.
7. Osteoporosis
8. Apical pulmonary fibrosis.

RECURRENT UNILATERAL UVEITIS 95% HLA B27+

PULMONARY DISEASE: PULMONARY FUNCTION DISORDERS: LIMITED PULMONARY FIBROSIS INJURY PLEUROPULMONARY

SECONDARY OSTEOPOROSIS



PATHOLOGY VAVULAR LOCK A-V CARDIOVASCULAR RISK

INTESTINAL ULCERATIVE COLITIS DISEASE CROHN 2-6%

NSAID NEPHROPATHY, IGA, AMILOISE DEPOSIT (RENAL AMYLOIDOSIS)

NEUROLOGICAL MANIFESTATIONS: HORSETAIL SYNDROME SPINE FRACTURES ROOT INJURY

Investigations:

- ESR and CRP are usually raised in active disease.
- RF ,ACPA and ANA are negative.
- HLA typing may helpful when the back pain suggestive of inflammatory in nature and other investigations are equivocal.

MRI is a sensitive tool to detect early changes before radiological manifestations (NON –RADIOLOGICAL SPA)

X-ray findings:

1-Sacroiliac joint irregular, widening, sclerosis, narrowing then fusion.in early stages the plain x-ray apparently normal so MRI of SIJ is needed to elicit early sacroiliitis.

2-Sequaring of vertebrae.

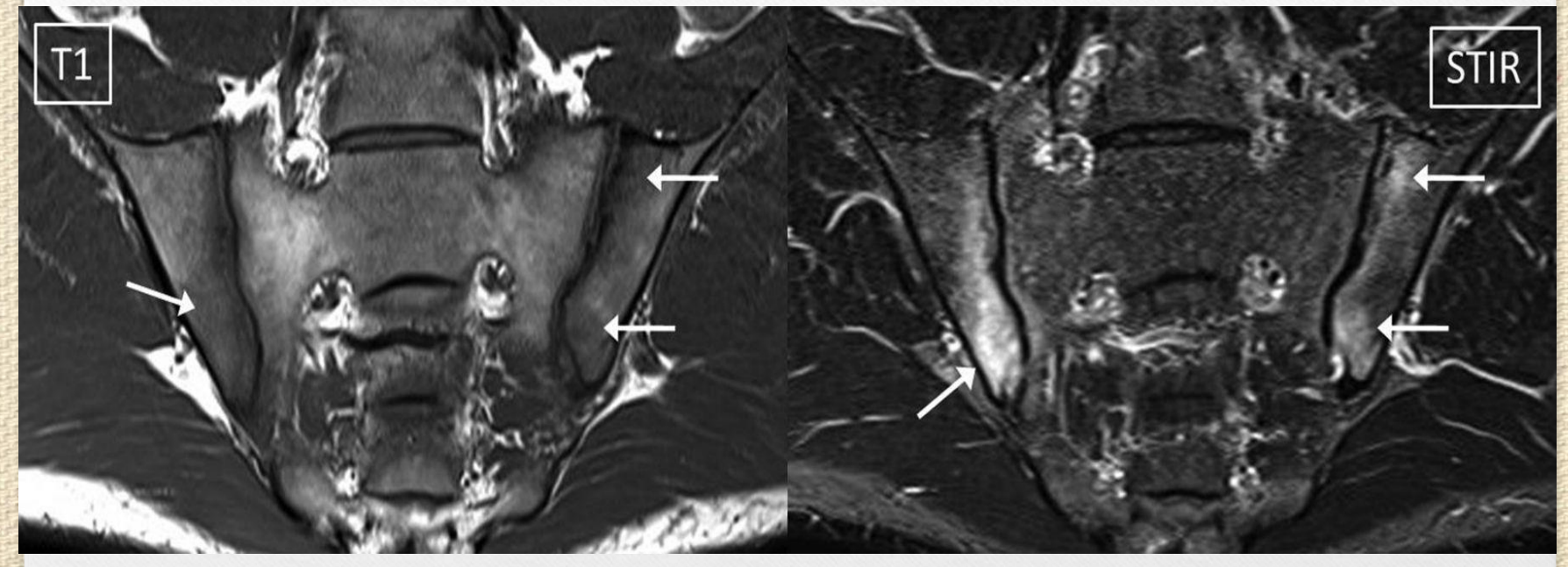
3- bridging Syndsmophyte.

4-Ossification of long Ligament and facetal joint fusion.

5-Bamboo spine appearance.

6-Erosion at site of enthesitis and erosive changes of peripheral joints.

7-Osteoporosis and atlanto-axial dislocation as late features


T1
STIR


CWRU


CWRU

Disease activity in AS can be assessed by BATH ANKYLOSING SPONDYLITIS DISEASE ACTIVITY INDEX (BASDAI), and ANKYLOSING SPONDYLITIS DISEASE ACTIVITY SCORE (ASDAS).

These indices are important in assessing INDICATION for biological treatment

Management:

- Early Dx.

- Aim is to relieve pain and stiffness, maintain wide range of movement and avoid deformity development .

- Patient education and appropriate physical activity are the cornerstones of management(daily back extension exercises) include morning warming up exercises, swimming is ideal exercise, avoid bad postures, and to punctuate prolong period of inactivity with breaks.

- NSAIDs and analgesia for pain and stiffness .
- There is no evidence of the efficacy of DMARDs, including sulfasalazine and methotrexate, for the treatment of axial disease. Sulfasalazine may be considered in patients with peripheral arthritis.
- Anti-TNF and IL-17 A therapy should be considered in patients who are inadequately controlled on standard therapy with a BASDAI score of $\geq$ 4.0 and a spinal pain score of $\geq$ 4.0. or ASDAS $\geq$ 2.1

- Local corticosteroid can be used in persistent plantar fasciitis and other and in peripheral arthritis.
- Oral corticosteroid may be require for uveitis.(should be sent urgently to ophthalmologist).
- Surgery. Hip, knees, shoulder restriction may need surgery. Hip arthroplasty

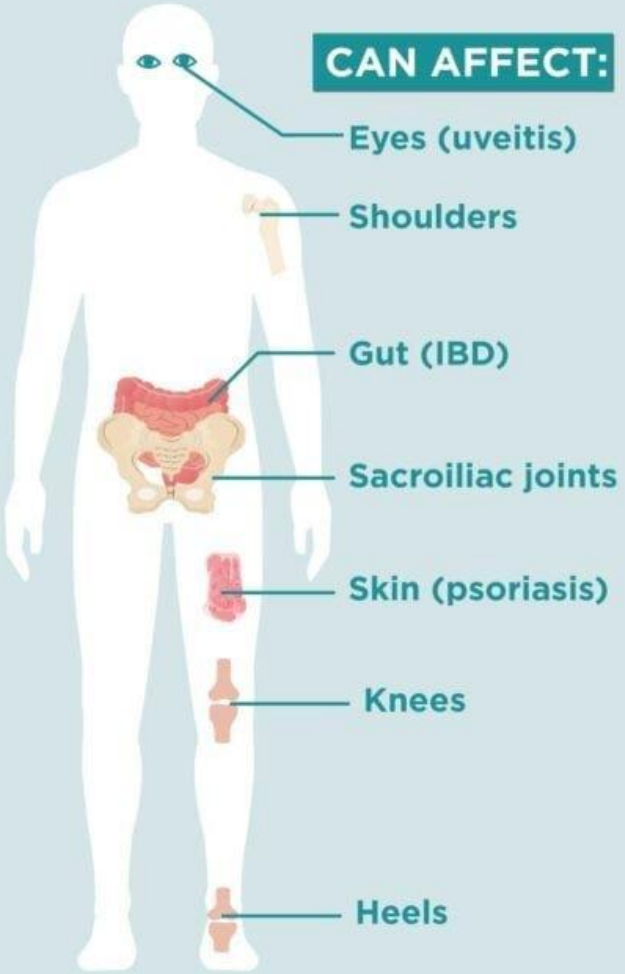
Over 75% of patients are able to remain in employment and enjoy a good quality of life.

Even if severe ankylosis develops, functional limitation may not be marked, as long as the spine is fused in an erect posture.

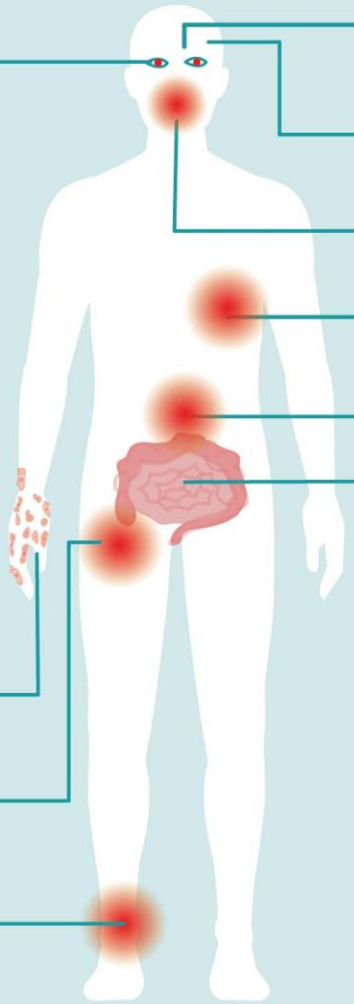
Ankylosing Spondylitis

- Inflammatory back pain and other joint pain
- Symptoms first strike before age 45
- Treated by a rheumatologist
- Some, but not all, patients are HLA-B27 positive
- More common in men; underdiagnosed in women

- Can cause spinal joints to fuse together
- Treated with NSAIDs and/or biologics

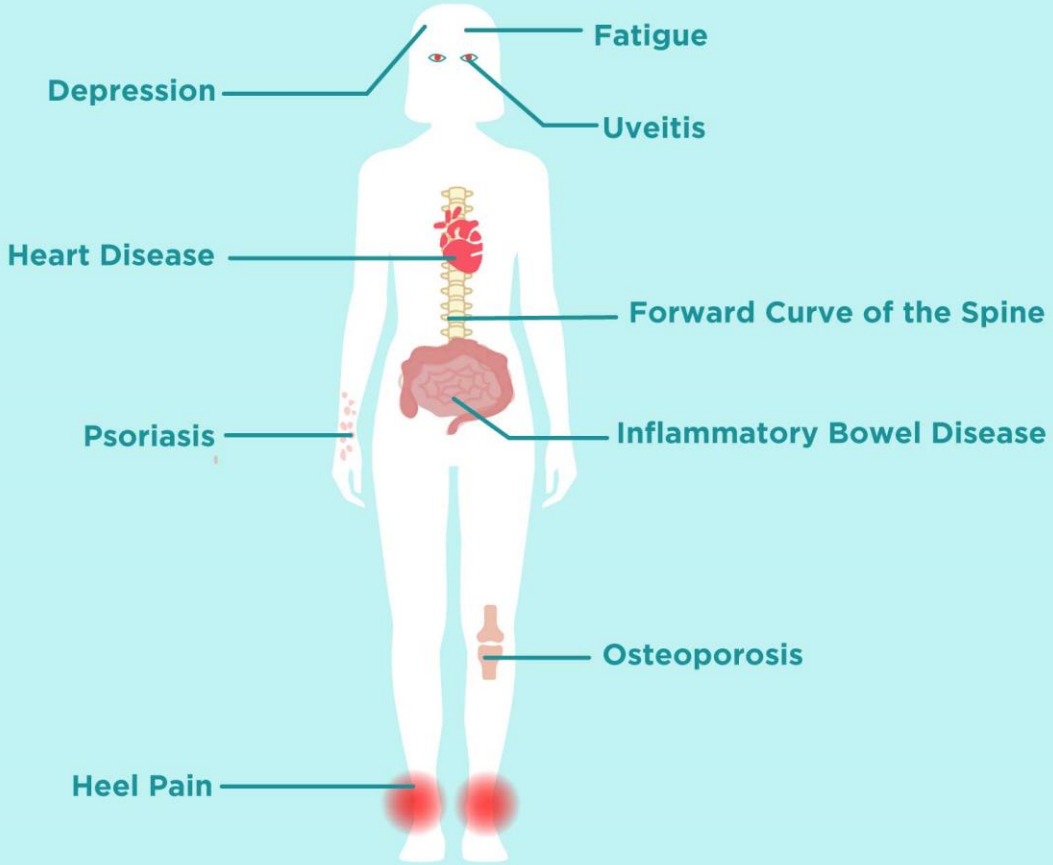


Ankylosing Spondylitis symptoms to never ignore



- Fever
- Fatigue
- Pain in your jaw
- Pain in your ribcage, such as when you exhale
- Chronic pain and stiffness in the lower back where your spine meets your pelvis
- Diarrhea, bloating, or other GI symptoms
- Pain that gets worse with inactivity or sitting still for long periods, such as while you sleep
- Pain that gets better from a hot shower
- Uveitis, or eye redness and inflammation
- Psoriasis
- Alternating buttock pain
- Pain in your heel or foot

Ankylosing Spondylitis Comorbidities



REACTIVE ARTHRITIS

Reactive arthritis is predominantly a disease of young men with a sex ratio of 15:1 and is possibly the most common cause of inflammatory arthritis in men aged 16-35; however, it may occur at any age.

Precipitated by Bacterial dysentery-mainly *Salmonella*, *Shigella*, *Campylobacter*or *Yersinia*, or
Sexually acquired infection with *Chlamydia*

REITER'S DISEASE

- **Classic triad***
- Non-specific urethritis
- Conjunctivitis (~50%)
- Reactive arthritis
- **Additional extra-articular features** Circinate balanitis (20-50%)
- Keratoderma blennorrhagica (15%)
- Nail dystrophy
- Buccal erosions (10%)

Reactive arthritis:

dactylitis(sausage-shaped digits) +

asymmetrical sacroiliatis

keratoderma blennorrhagicum

PSORIATIC ARTHROPATHY

- Psoriatic arthritis occurs in about 1 in 1000 of the population and in 7% of patients with psoriasis.
- A wide spectrum of joint disease is seen but five major presentations are recognized:

1. *Asymmetrical inflammatory oligoarthritis* (40%).
2. *Symmetrical polyarthritis* (25%).
3. *Predominant distal interphalangeal joint (DIPJ) arthritis* (15%).
4. *Psoriatic spondylitis* (15%).
5. *Arthritis mutilans* (5%).

Psoriatic arthropathy (arthritis mutilans)

'telescoped'

'main en lorgnette'

Management

NSAID

MTX
Sulfasalazin

Anti TNF


THANK YOU!