



SNS COLLEGE OF ALLIED HEALTH SCIENCES
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DEPARTMENT: ALLIED HEALTH SCIENCES
COURSE NAME: ORTHOPEDICS

Topic:Ankylosing spondylitis



Introduction



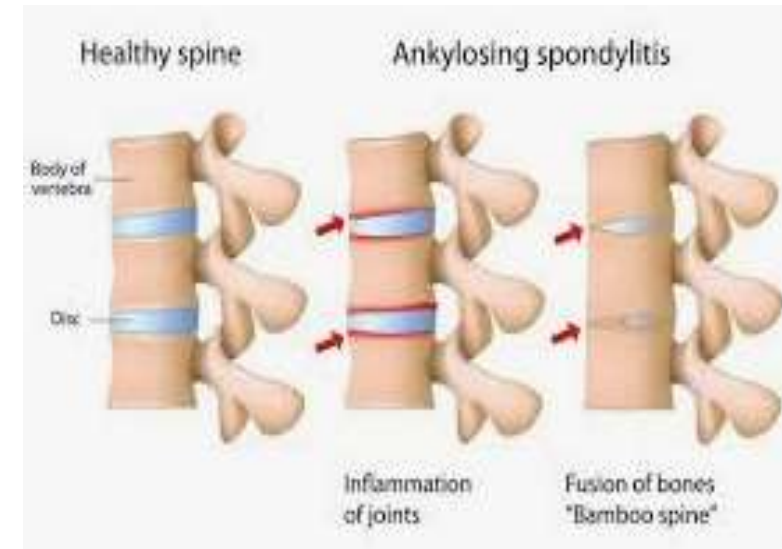
Definition

Ankylosing: Means stiff or rigid

Spondyl: Means spine

Itis: Refers to inflammation

Ankylosing spondylitis (AS) is a chronic inflammatory disease that affects the spine and other joints. It's a type of arthritis that can cause stiffness and pain





Etiology



The exact cause of ankylosing spondylitis (AS) is unknown.

Genetics

Environmental factors

Mechanical stress on the lower back and spine may contribute to AS.

Subclinical intestinal inflammation and overt inflammatory bowel disease (IBD) have been linked to AS.

Other factors

Other gene variations may also cause AS.

The precise mechanisms by which non-HLA-B27 MHC genes affect AS remain largely unknown.

AS is a type of arthritis that affects the spine and lower back. It typically begins in late adolescence or early adulthood. There's no cure for AS, but treatments can help slow or stop its progression



Risk factors & Complications



RISK FACTORS

Genetics

Age

Gender

Other health conditions

Vitamin D levels: Low levels of vitamin D may be associated with an increased risk

COMPLICATIONS

Bony bridges form between vertebrae in the spine

Bones in the chest may fuse

The spine becomes less flexible and can result in a hunched posture

If ribs are affected, it can be difficult to breathe deeply



Signs & Symptoms



Pain and stiffness: Back pain, especially in the lower back and hips, and stiffness in the morning

Joint pain: Pain and swelling in the knees, ankles, hips, shoulders, and other joints

Fatigue: Extreme tiredness that doesn't improve with sleep or rest

Eye inflammation: Painful and sometimes red eyes, sensitivity to light, and blurred vision

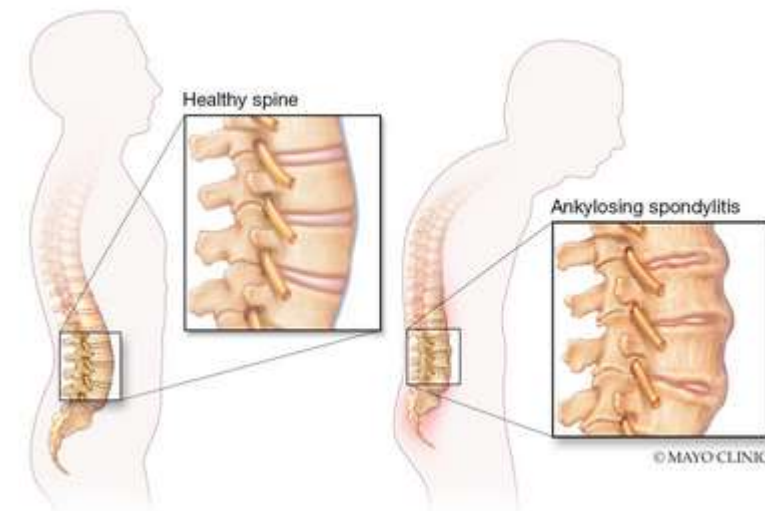
Chest pain: Chest tightness or pain that makes it difficult to breathe deeply

Digestive issues: Diarrhea, bloody or slimy stools, or inflammatory bowel disease (IBD)

Skin rashes: A skin rash

Weight loss: Unexplained weight loss

Other symptoms: Fever, anemia, depression, anxiety, jaw inflammation, and tenderness at the base of the pelvis





Assessment 1



- 1. What is Ankylosing spondylitis
- 2. Mention the Risk factors
- 3. Etiological factor



Diagnosis



Medical history

Physical exam

Imaging tests

X-rays: Can show joint changes, but may not be able to detect early-stage disease

Magnetic resonance imaging (MRI): Can detect early-stage disease, but is more expensive than X-rays

Blood tests

Erythrocyte sedimentation rate (ESR): Measures how quickly red blood cells settle at the bottom of a test tube

C-reactive protein (CRP): Another marker of inflammation

Genetic testing

The HLA-B27 gene is more likely to be found in people with ankylosing spondylitis

Ankylosing spondylitis is an inflammatory disease that can cause the vertebrae in the spine to fuse. This can lead to a hunched posture and difficulty breathing deeply.

Many people experience symptoms for years before getting a diagnosis.



- Role play about symptoms-1

Assessment 2





Treatment



- Ankylosing spondylitis (AS) is treated with a combination of medication, physical therapy, and sometimes surgery. The goal of treatment is to reduce pain and stiffness, prevent deformities, and maintain a normal lifestyle.

Medication

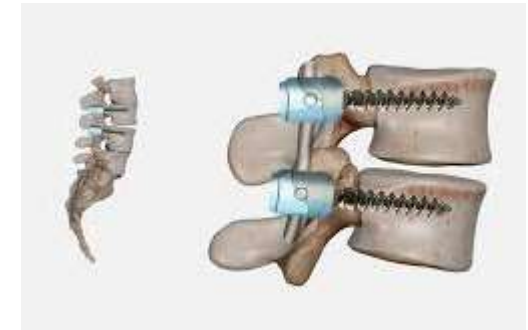
- Nonsteroidal anti-inflammatory drugs (NSAIDs): Such as naproxen sodium (Aleve) and ibuprofen (Advil, Motrin IB)
- Biologic medications: Such as tumor necrosis factor (TNF) blockers and interleukin-17A (IL-17A) inhibitors
- Janus kinase (JAK) inhibitors: Such as tofacitinib (Xeljanz or Xeljanz XR) and upadacitinib (Rinvoq)
- Corticosteroids: Injected into the joint to reduce inflammation and pain
- Disease-modifying anti-rheumatic drugs (DMARDs): Such as sulfasalazine and methotrexate

Surgical management

- The most common surgeries are laminectomy, spinal fusion, and osteotomy.

Types of surgery

- Laminectomy:** A minimally invasive procedure that relieves pressure on nerve roots by removing part of the vertebra bone
- Spinal fusion:** A procedure that stabilizes the spine using rods, bars, or screws
- Osteotomy:** A type of spinal fusion that restores a straight or more natural curve to the spine
- Disc replacement:** A procedure that replaces damaged spinal discs with artificial discs to improve mobility
- Hip replacement:** A procedure that may be recommended if hip joints are severely damaged



Lumbar Artificial Disc Replacement





Recovery



Recovery

- Recovery time after surgery can range from a few weeks to a few months
- After surgery, you may need to brace your spine for at least six to 12 weeks
- patient need X-rays every three to six months to check healing progress



Treatment



Physical therapy

- Exercises to improve strength and flexibility
- Massage and manipulation to improve comfort and spinal flexibility

Surgery

- Joint replacement surgery to improve pain and movement in the affected joint
- Surgery to place rods in the spine
- Surgery to remove parts of the thickened and hardened bone

Other treatments

- Anti-ulcer drugs to protect the stomach and intestinal lining



Quiz about

- 1. Surgical managements
- 2. Therapies

Assessment-3





Summary



- Reference
- <https://youtu.be/a23A3nAa00E?si=PJmrkf6HZSxR6D>
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