Unit VII – Problem 5 – Clinical: Osteoarthritis

- <u>Definition</u>: chronic, progressive, non-inflammatory, degenerative disease of articular cartilage of weight-bearing joints especially in:
 - Hips (more common in Europe).
 - Knee (common in our region).
 - Spine.

Etiology:

- **Primary**: occurring for unknown reason.
- **Secondary**: follows a known cause:
 - ✓ Congenital (genu varum & genu valgum)
 - ✓ Traumatic.
 - ✓ Inflammatory and infection.
 - ✓ Metabolic.

- Clinical manifestations:

- Pain.
- Stiffness (rigidity of the joint).
- Swelling and wasting of muscles.
- Deformity.
- Restriction of joint movement.

- Management:

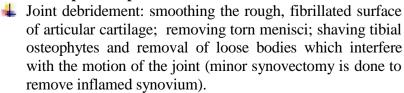
- Diagnosis:
 - ✓ History taking.
 - ✓ Clinical examination:
 - ❖ Look: compare sides (for symmetry), shape, position & skin.
 - ❖ Feel: temperature, anatomical landmarks, tenderness and muscles.
 - ❖ Move (active, passive & against resistance): mainly flexionextension in addition to slight rotation (when the knee is flexed).
 - **Measurements**: girth and length.
 - **Special tests**
 - ✓ Investigations: plain radiographs will show:
 - Diminished joint space.
 - Sub-chondral increased density.
 - Osteophytes.
 - ***** Loose bodies.
 - **A** Cyst formation.
 - Deformity.

• Treatment:

- Conservative: aims to:
 - ❖ Relieve pain: by using NSAIDs and injection (oil injections: containing hyaluronic acid and provide lubrication. Another type of injections is intra-articular corticosteroids injection).
 - ❖ Reduce the load: this is achieved by providing walking aids, modifying activities, reducing weight, periods of rest, suitable shoes and physiotherapy.
 - **❖** Improve joint mobility (movement) and stability.

✓ Operative:

Conservative operative procedures:



Articular cartilage restoration

Osteotomies:

Re-alignment osteotomy.



Fusion (removing the knee joint and fusing the femur and tibia together converting them to one bone. This leads to function loss).



***** Replacement arthroplasty.

- Rehabilitation.
- **Knee injuries can happen to:**
 - Bones: mainly fractures which can be:
 - ✓ Extra-articular: lower femur, upper tibia or patella.
 - ✓ <u>Intra-articular</u>: gap, step, comminutions or combinations.
 - Cartilage: depends if injury to menisci is in the white (no healing) or red (fast healing) components.
 - **Ligaments and capsule**: classified to 1st (minimal rupture), 2nd (partial rupture) and 3rd (complete rupture) degrees.