

OSTEOARTHRITIS

Knee Osteoarthritis



- KNEE
- HIP
- PIP
- DIP
- 1st CMC
- 1st MTP
- Facet Joints (Cx and LS SPINE)

OSTEOARTHRITIS Misnomer

- NOT AN INFLAMMATORY PATHOLOGY
- DEGENERATIVE JOINT DISEASE/ OSTEOARTHROSIS / WEAR & TEAR JOINT DISEASE

• JOINTS

Knee (MC)

HIP

Spine

PIP JOINT

DIP JOINT

1st CMC JOINT

1st MTP JOINT



Classical sparing of wrist & MCPJ they are mainly involved in RA)

- In OA Knee ←
 - MC bone: Patella
 - MC compartment: Medial
 - MC Muscle : Vastus medialis obliques (VMO)
- Pathogenesis
 - OUTERBRIDGE STAGING[ARTICULAR CARTILAGE]
 - I : Water content increases → Softening /edema/ effusion of Articular cartilage
 - II: Fissures/fragmentation /cracks
 - III: Partial detachment of Articular cartilage
 - Iv: Complete detachment of Articular cartilage leading to exposed & denuded subc hondral bone

CASE

old ♀ , Perimenopausal

knee pain

Tenderness ⊕

walking distance ↓↓ too much.

Crackling sound from joint during flexion & Extension.



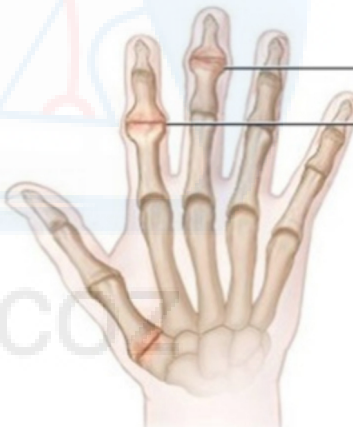
Normal



Bowleggedness (Vargus)



Knock Knees (Valgus)



Heberden's node

Bouchard's node

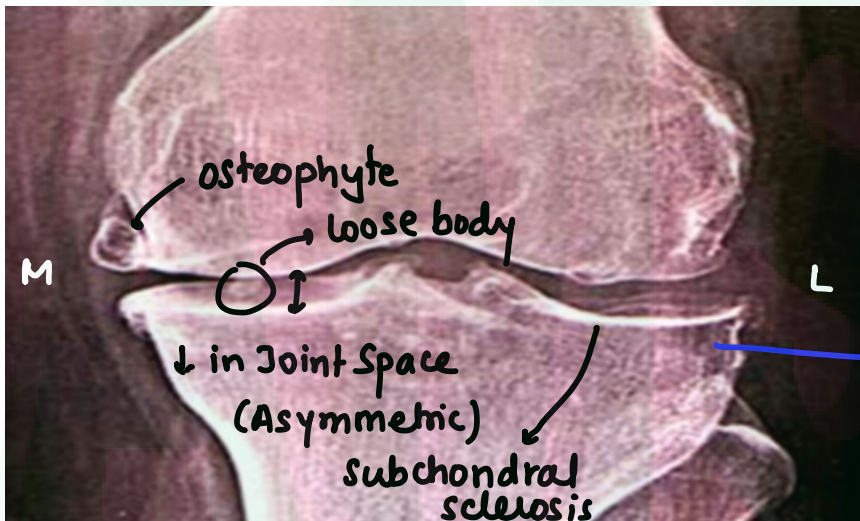
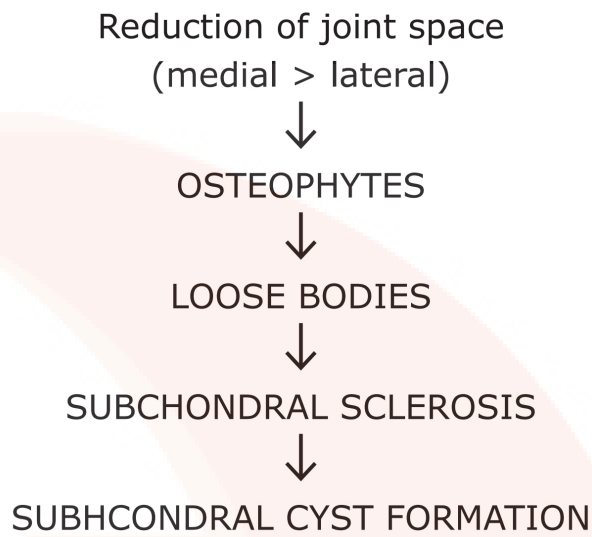
CLINICAL PICTURES 50-60 YEARS +FEMALE

- 1st symptom: knee pain
- 1st sign: Tenderness
- BONY CREPITUS –SWELLING
- REDUCED WALKING DISTANCE
- DEFORMITIES
 - Knee (Genu varun/Bow legs)
 - PIP Joint (Bouchard’s nodes)
 - DIP joint (Herberdens’ node)

DIAGNOSIS X Ray Both knee joints

- AP standing view
- Lateral view

1st X-ray sign : Asymmetrical



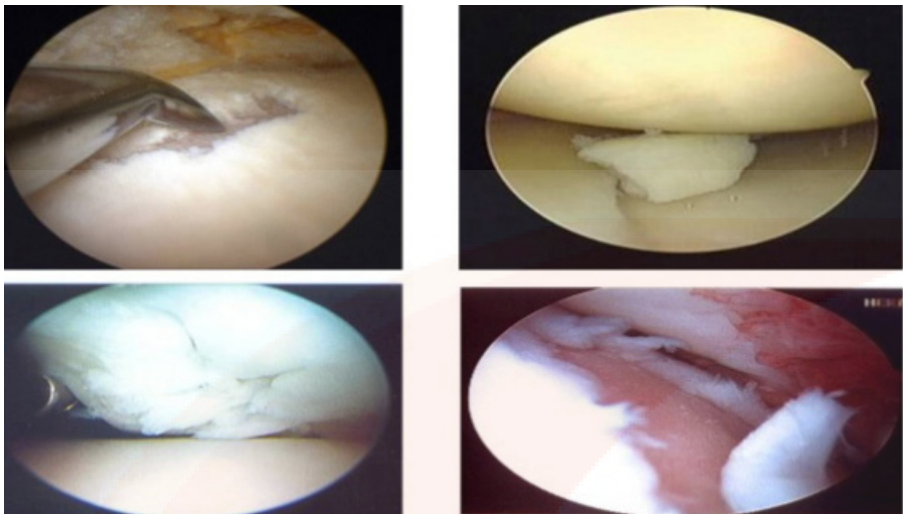
MX

CONSERVATIVE

1. Offloading device
 - Walking stick/crutch to be held in opp. Hand
 - Hinge knee braces
2. NSAIDS
 - Safest = Acetaminophen
3. ETORICOXIB (Coxib)
60/90/120 mg
Less G.I. side effects
4. topical liniments /lotions/oils
5. GLUCOSAMINE/DIACERIN/
chondroitin sulfata/s-adenosyl
methionine
6. Intra-articular injections of
viscosupplements
(Hyaluronic acid)
↑ **Viscosity of synovial fluid**
7. Isometric Quadriceps
Strengthening exercises

OPERATURE

1. Osteotomies
 - HTO (high Tibial osteotomy)
 - PFO (Prox. Fibular osteotomy)
 - Done mainly for deformity correction
2. Arthroscopy
 - Remove loose bodies
 - Remove debris/adhesions
3. Total knee replacement TKR
Absolute indication → **PAIN**



Total Knee Replacement involves the surgical removal of the end of the femur, the beginning of the tibia and the under surface of the kneecap. These once arthritic areas are then replaced with metal and plastic components. The implants are typically cemented in place.



Normal Knee



Arthritic Knee



Replaced Knee



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Q. Which of the following is NOT False About Anatomy of Cruciate Ligaments?	Q. All of the following are true except:
Menisci move forwards Ā knee extension & backwards Ā knee flexion" a. ACL and PCL Provide stability to the knee in Coronal Plane b. ACL and PCL are intra synovial ☒ c. They are supplied by Middle Geniculate Artery (Branch of Popliteal Artery) d. They are supplied by Anterior Articular Nerve (Branch of Tibial Nerve)	a. Menisci Move forwards with Knee Extension and Backwards with Knee Flexion b. Medial Meniscus degenerates earlier and more than Lateral Meniscus c. Post Partial Menisectomy , Remnants of Lateral Meniscus degenerate more than remnants of Medial Meniscus ☒ d. Medial Meniscus is more commonly torn in meniscal pathologies like Meniscal Cysts and Discoid Meniscus

DAMS



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