

Osteoarthritis:

- non-inflammatory slowly progressive joint disease, mainly involving the cartilage
- progressive destruction of articular cartilage
- site: joints - knee, hips, cervical proximal and distal interphalangeal joints

PATHOGENESIS:

- ⇒ Genetic factors: Gene involved in proteoglycan metabolism WNT signaling
- ⇒ Environmental: biochemical stress, obesity, joint stability

CHANGES IN ARTICULAR CARTILAGE:

- ⇒ Cracks on superficial layer of the AC
↳ lead to fibrillation
- ⇒ Flow of synovial fluid along the cracks.
- ⇒ Inflammatory Reaction
- ⇒ Grossly → Articular surface appears soft and granular
- ⇒ Breaking off dead pieces of articular cartilage
↳ They form loose bodies (joint mice)

CHANGES IN SUBCHONDRAL BONE:

When full thickness of the articular cartilage is lost the subchondral bone is exposed

typical Gout → conventional
Fibro, Angio.

- Bone eburnation: The bone appear thick, shiny, smooth
known as Bone eburnation

- Subchondral cyst → The eburnated bone may crack
And forces synovial fluid from the joint surface
into the subchondral bone

↓ from
cyst →

• Development of osteophytes → Mushroom-shaped pearly
grayish bony outgrowth - osteophytes.

C.F

→ slowly progressive disease.

→ deep, aching pain

→ joints may be swollen / tender

→ Prominent osteophytes at the dorsal interphalangeal joints
is known as Heberden nodes.