

OSTEOARTHRISIS

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OSTEOARTHRISIS

▶ Definition

A non-inflammatory (DEGENERATIVE) disease affecting articular cartilage of joints

OSTEOARTHRISIS

- ▶ Primary

Intrinsic defect

(mechanical,vascular,cartilage,HEREDITARY-generalised O.A)

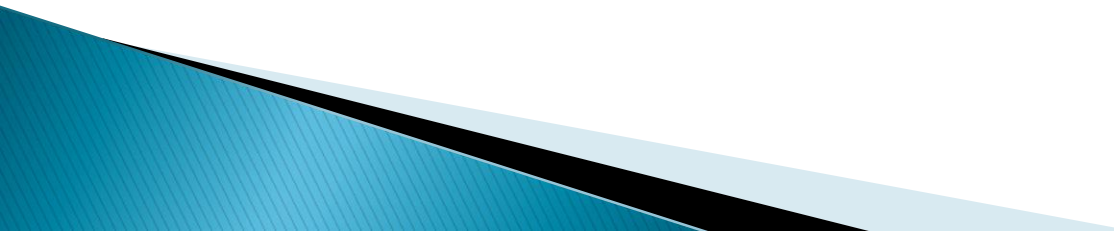
- ▶ Secondary

Sec. to local or systemic disease

OSTEOARTHRISIS

- ▶ Increased load eg;obesity(hips&knees take 3-4 body wt. with each step)
 - ▶ Trauma ;osteocondral,malunion,sport injury
 - ▶ Congenital/developmental;CDH,multiple epiphyseal dysplasia
 - ▶ Infection
 - ▶ Necrosis;Perth `s disease,osteonecrosis,steroids
 - ▶ Haematologic;SCD,haemophaelia
 - ▶ Endocrine;DM,acromegaly
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OSTEOARTHRISIS

- ▶ Metabolic; crystalline deposition disease(gout, CPPD)paget disease
 - ▶ Inflammatory joint disease
 - ▶ Neuropathic;DM,tubes dorsalis
 - ▶ Occupation
- 



OSTEOARTHRISIS

Epidemiology

- ▶ Common in our community esp.knees
- ▶ Much more in females ;esp.Obese
- ▶ Presents earlier than West
- ▶ About 90% of those over 40 have asymptomatic degeneration of wt.bearing joints
- ▶ Commonest joints are;knee,hip,C.S&L.S,1st CMJ,1st MTPJ,IPJ

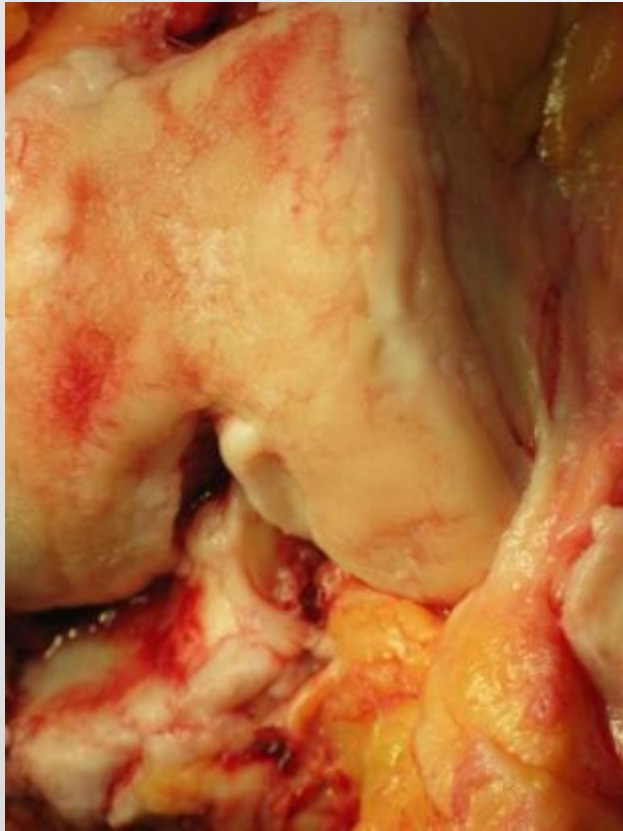
OSTEOARTHRISIS

Pathophysiology

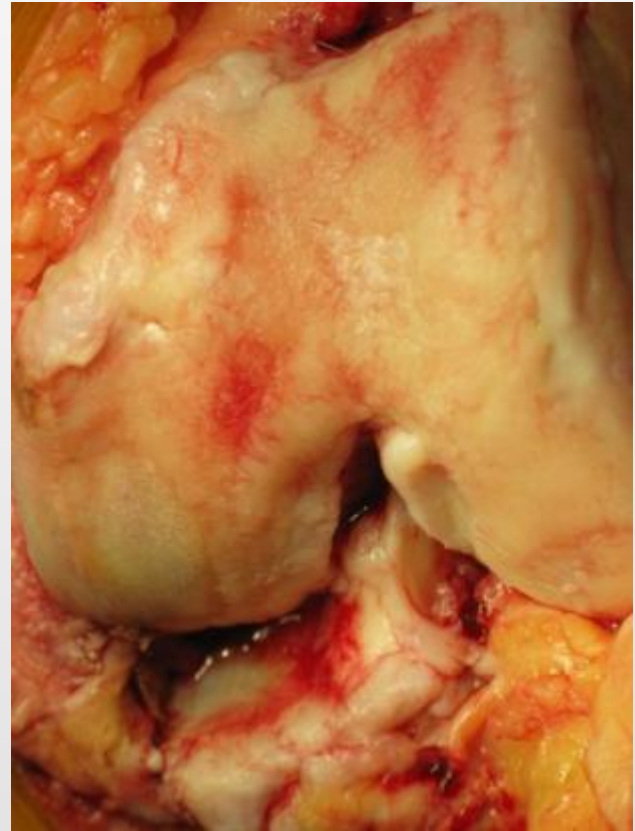
- ▶ Increased water content; swelling & softening of cartilage
- ▶ Depletion of Proteoglycan
- ▶ Chondrocyte damage & synovitis › proteolytic enzymes › collagen disruption
- ▶ **FIBRILATION** on wt. bearing surfaces
- ▶ **LOSS OF CARTILAGE HEIGHT** & exposed bone › **DEC. JOINT SPACE**

OSTEOARTHRISIS

- ▶ Attempts of repair;
SUBCHONDRAL SCLEROSIS
eburnation (ivory like bone)
- ▶ Fissuring (cracks);
synovial fluid pumped into subchondral
bone › SUBCHONDRAL CYST
- ▶ Hypervas. of synovium & subchon. bone
› proliferation of adjacent cartilage › enchondral
ossification › OSTEOPHYTE

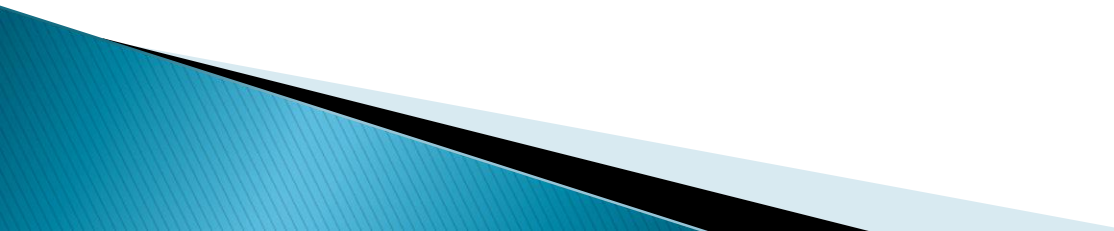


fissuring



Osteophytes & eburnation

OSTEOARTHRISIS

- ▶ Synovial & capsular thickening
 - ▶ Progressive bone erosion ▶ **BONE COLLAPSE**
 - ▶ Fragmented osteophyte ▶ **LOOSE BODIES**
 - ▶ Loss of height & lig. laxity ▶ **MALALIGNMENT**
- 



Cysts&sclerosis



Loss of bone&deformity



OSTEOARTHRISIS

▶ Clinical picture

SYMPTOMS

P ,I ,N ,S ,D

SIGNS

E ,M ,T ,I ,C ,D ,N

OSTEOARTHRISIS

▶ INVESTIGATIONS

x-ray (**STANDING** in L.L)

osteophytes

cysts

sclerosis

loss of space

malalignment

sulux.

erosion

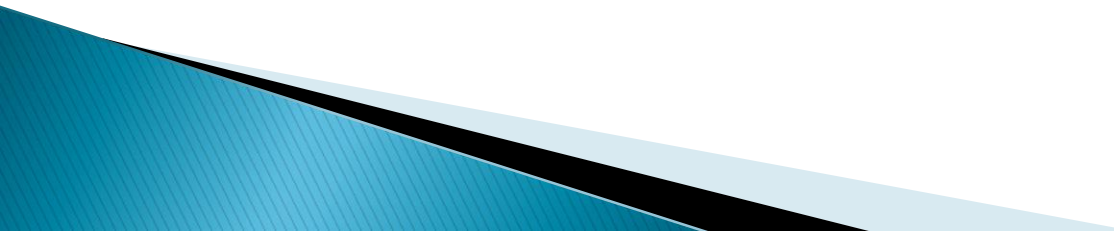
loose bodies

synovial analysis (in diff.diag.)





OSTEOARTHRISIS

- ▶ Management
 - ▶ History
 - ▶ Examination
 - ▶ Investigations
- 

OSTEOARTHRISIS

- ▶ **Conservative treatment**
 - decrease load (wt.,stick,rest)
 - modify activity
 - physiotherapy
 - prevent contractures
 - muscle strengthening
 - ROM
 - medications
 - systemic
 - local

OSTEOARTHRISIS

▶ Surgical treatment

1. Joint Debridement
2. Corrective Osteotomy

what?

varus/valgus.abd./add.

why?

realign axis&redistribute wt.

which joint?

knee/hip

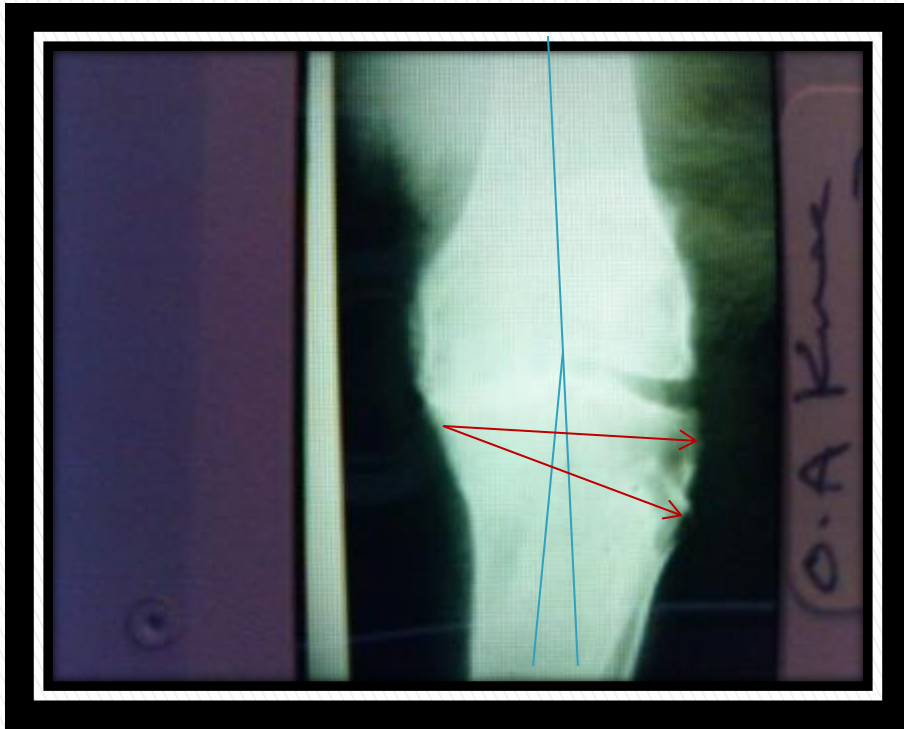
OSTEOARTHRISIS

▶ what joint

mobile, stable, minimally deformed
which patient

young, thin, active

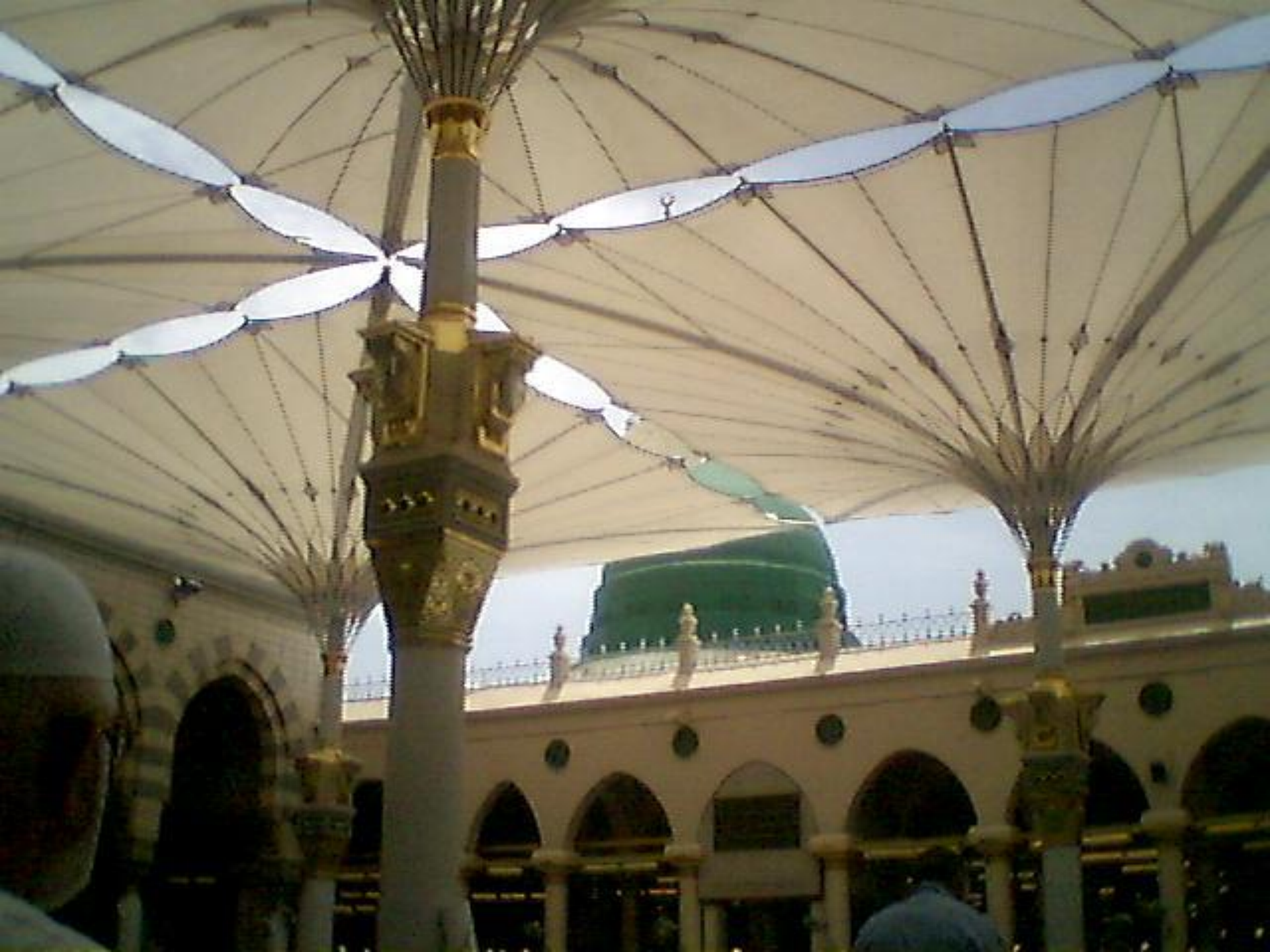




PREOPERATIVE



POST OSTEOTOMY



OSTEOARTHRISIS

3. Arthrodesis

why;

transfer painful stiff into painless stiff
joint

stabilise joint

which joint;

wrist, ankle, CS, LS, hand

hips&knees (**LESS COMMON**)

OSTEOARTHRISIS

when?

failed TKR(infection)

neuropathic

paralitic(flail)

loss of quad.

stiff in young

OSTEOARTHRISIS

when NOT;

ipsilateral disease

contralateral hip disease

bilateral j.disease

LS./OA

**TRANSFER LOAD TO DISTAL&CONTRALATERAL
JOINTS**

OSTEOARTHRISIS

4.Arthroplasty

▶ Excision

what?

remove part of joint to allow
movement

disadvantage;

weakness

shortening

walking aid

OSTEOARTHRISIS

which joint?

hip ;post infection(girdle stone)

1st.MTPJ

1st.MPJ

▶ Joint replacement

PARTIAL

which joint;

hip (fracture)

knee

shoulder(SCD,RA)

OSTEOARTHRISIS

when;

necrosis

degenerative

trauma

inflammatory(ONLY SHOULDER)

when NOT

infection

young

inflammatory



OSTEOARTHRISIS

TOTAL REPLACEMENT

which?

knees , hips, shoulders, ankles,
elbow

when?

painful, deformed stiff joint
old patient!!

OSTEOARTHRITIS

when NOT;

neuropathic

infection

paralytic

young, active(RELATIVE)

