

Patellar Instability After TKR

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Predisposing Factors

- Pre-op:
 - Pre-existing patellar instability
 - Bony alignment / shapes
 - Patellar alta
 - Lateral contracture

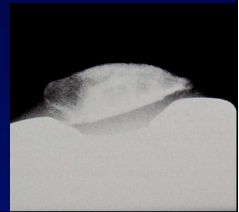


Predisposing Factors

- Intra-op
 - TKR design – femoral trochlea, ? Mobile bearing better
 - T-F component malalignment
 - Over-stuffing PFJ
 - Poor soft tissue balance
 - There is a tendency to medialise the trochlea
Meijerink et al, Nijmegen, Acta Orthop 2007

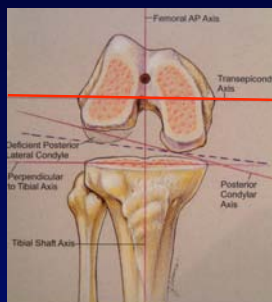
Treatment

- PREVENTION!
 - Surgical technique
 - Use component positioning to advantage
 - Femur- lateralise, ER, 5° varus
 - Tibia- lateralise, ER
BEWARE external tibial torsion
 - Patella- perpendicular cut



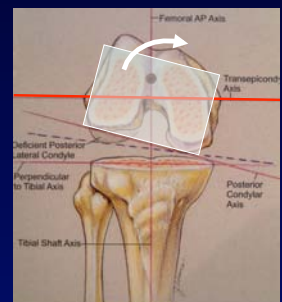
Treatment

- PREVENTION!
 - Surgical technique
 - Beware the valgus knee
 - Adjust landmarks for posterior deficiency LFC



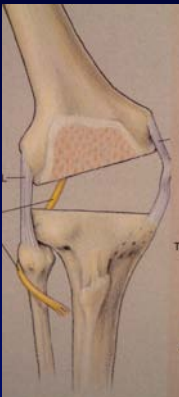
Treatment

- PREVENTION!
 - Surgical technique
 - Beware the valgus knee
 - Adjust landmarks for posterior deficiency LFC




Treatment

- PREVENTION!
 - Surgical technique
 - Beware the valgus knee
 - Release lateral contracture




Treatment

- Identify cause
- History
- Examination
- Imaging
 - Xrays (including pre-op)
 - CT




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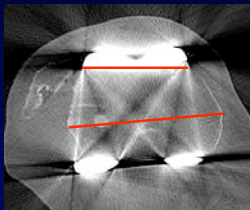
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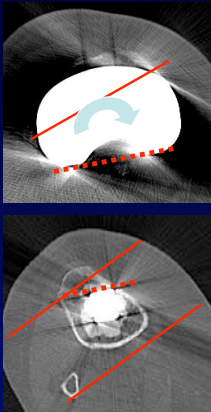
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Treatment

- Identify cause
- History
- Examination
- Imaging-
 - Xrays (including pre-op)
 - CT




Treatment

- Minor / T-F alignment good
 - Non-surgical unlikely to work
- Surgery
 - Lateral retinacular release [at TKR]
 - Extensor mechanism realignment alone
 - MPFL reconstruction
 - Proximal realignment
 - Tibial tuberosity transfer




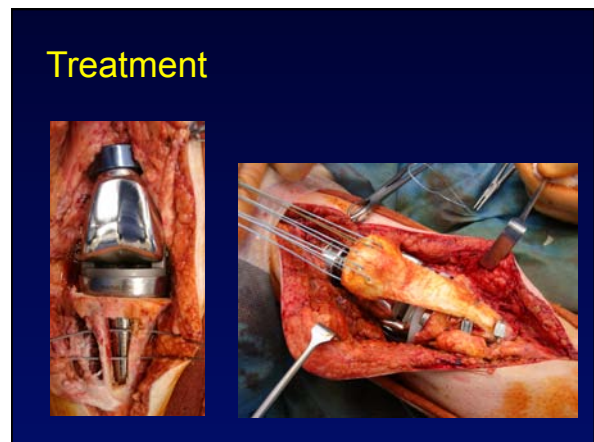
Treatment

- Major
 - Malalignment-
 - T-F revision (+/- constraint in MCL laxity)
 - +/- P-F realignment



Treatment

- Major
 - In patellectomy cases
 - make patella
 - Iliac graft
 - Trabecular metal
 - Allograft extensor mechanism

Treatment

- Major
 - External tibial torsion
 - <45° - deal with by ↑ tibial ER (? downsize)
 - >45° - proximal tibial de-rotation osteotomy

Ramaswamy et al, Toronto, *JBJS(Br)* 2009

Summary

- Common (especially minor)
- Usually surgical error
- Prevention definitely best

