Different types of prosthesis for patellofemoral joint arthroplasty

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Isolated PF arthritis

- PFJ arthroplasty since more than 20 years
- More than 15 different devices on the market

Strict Indications for PF arthroplasty

- Radiographically proven severe osteoarthritis PFJ
- No significant axial deformity
- "Normal" tibiofemoral joint
- Extended Indications
- Final decision at arthrotomy?

Extended Indications

- Failed Realignement - Fulkerson/Elmslie
- Younger Patient with Early Disease
- Dislocation / Subluxation
- Failed Patelllectomy
- Post - trauma (fracture)

Relative Contra-indications

- Early Chondral Disease
- Patella Baja
- True Algodystrophy
- Pain Enhancement Syndrome

Lubinus
Design Criteria: 1994
- Surface replacement (minimal bone resection)
- External rotation of femoral component
- Broad trochlea surface, unconstrained in extension
- Patella captured and stable in flexion
- Congruous articulation throughout range
- Improved patello-femoral tracking in mechanical axis
- 4 (today 5) component sizes
How much flexibility does the implant allow for proper restoration of natural anatomy?

Is the implant sized to potentially be compatible with a unicompartmental knee replacement if the indications are appropriate?

Are there any tracking, balancing, or overhang issues that must be considered?

Is the objective of PFA to restore natural trochlear anatomy or to be a staging treatment leading to TKA? Is a symmetric device more likely to ensure a TKA-like placement mentality to ensure repeatability?

What is the effect of properly establishing correct and repeatable patella tracking on the kinematics of the knee, and does an anatomic implant support this objective better?

What is the optimum distribution and number of pins to ensure both fixation and proper distribution of forces at the bone to implant interface?

Which surface is the key priority for fixation (anterior or distal)?
How much does a constrained implant limit optimum placement in restoring natural trochlear anatomy by increasing its control of patellar tracking?

What additional patellar forces may be generated by a high constraint level on the trochlear implant?

What additional soft tissue considerations exist with a less constrained implant?

How do the failure modes change with implant constraint level?

Performance is strongly linked to:

- Constraint
- Surgical technique
Limited resurfacing of the trochlea?

- Good indication for a well-selected patient population: very few indications!
- New anixillarity for better and more reproducible positioning (ML and rotational)
- Careful analysis of anatomy and alignment
- Surgical technique & experience!!

Thank you for your attention!!