5th course of advanced surgery of the knee
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Arthroplasty after previous surgery: Skin incisions - approaches

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Incisions:
Posteromedial
Medial parapatellar
Midline
Lateral parapatellar
Which way to follow?

Courtesy of Dr. David Dejour, Lyon
Creativity
Which way to follow?

Medial parapatellar approach

Right

Subvastus approach
Which way to follow?

Posteromedial approach?

Left

Lateral parapatellar approach
1. Use previous skin incisions
2. Avoid scar confluence and « dead triangles »
3. Ignore short previous medial or lateral incisions
4. Ignore strict transverse incisions
5. If parallel incisions exist, choose the most lateral
6. Beware wide scars with thin or absent subcutaneous tissue
7. Advice from plastic surgery (i.e. soft-tissue expansion techniques)
8. Exceptional cases: Make incision first, plan surgery in 2nd step
Ignore strict transverse incisions
The curved LCW high tibial osteotomy incision
Classical situations

The previous open meniscectomy incision
Stiff extensor mechanism

- Prevent skin necrosis / wound breakdown (ATT, Patella) after long standing flexion deficit
- Not too aggressive with flexion
- Consider previous scars
- Use the most lateral

Courtesy of Dr David Dejour, Lyon
Plan muscle transfer from beginning if needed (medial gastrocnemius)
Approaches

**Capsular incisions:**
- Posteromedial
- Medial parapatellar
- Midline
- Lateral parapatellar
Approaches

Medial parapatellar
Possible proximal extension: Z-lengthening

Extraarticular procedure

Rectus separated from underlying vastus

5-8 controlled rectus incisions until 80° of knee flexion

From: Ranawat CS, Flynn WF. The stiff knee: ankylosis and flexion
1. Destroying the continuity of the extensor mechanism is a step that will severely influence postoperative rehabilitation.

2. Extensor power is one of the most important determinants for physiologic walking (Lamb & Frost, J Arthroplasty 2003)

3. Therefore we do not recommend or perform quadriceps or patella ligament lengthening together with total knee arthroplasty.

4. **We do not like to sacrifice quadriceps power for better range of motion!**

*Kohn D, Journées Lyonnaises du Genou, 2006*
When to add ATT osteotomy?

≈ 10% in our revision TKA series
Approaches

When to add ATT osteotomy?

Avoid patellar tendon avulsion
Transpatellar access for intramedullary stabilisation of the tibia

Gerich T, Backes F, Pape D, Seil R
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