Reconstruction of chronic ruptures of extensor mechanism

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chronic ruptures of extensor mechanism

- Quadriceps tendon
- Patellar tendon
- Patellar fracture malunion
- ATT fracture malunion

chronic rupture of quadriceps tendon

- Defect in the suprapatellar area (obesity +/-)
- Low-lying patella
- Active extension deficit
- Proximal mobility of the patellar: QT retraction

X-rays

- Comparative profile x-rays
- Confirm the diagnosis: « low patella »

MRI

Planification:
GAP size & muscular degenerative tissue

Surgical procedure

- Chronic rupture with retraction (neglected rupture)
  - Suture + metallic wire
- Chronic rupture without retraction (iterative rupture)
  - Suture + biologic tissue
**Suture + metallic wire**

- Developed by P. Chambat
- Indication:
  - chronic rupture with large GAP
  - fixed patella
  - patellar tendon retraction

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**Operative procedure**

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**Introduction of transversal K wire**

- Patella
- rectus femoris

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Horizontal K wire + vertical wire

The vertical wire are tightened: each twist will close the gap

- CANNING OF SARDINES TECHNIQUE
Postoperative care

- Splint at rest at 30° of flexion
- Extension splint for walking: full WB
- Manual passive rehab and progressive ROM
  - 0-45° D15
  - 0-70° D15-30
  - 0-90° D30-45
  - Avoid flexion over 120° (3-6 mo)
- Material removal (>6 mo)

suture + biologic reinforcement

Bring collagen!

Semi-tendinosus + Patellar tendon

Patellar Tunnel

Fiberwire Suture
chronic rupture of patellar tendon

- Defect in the infrapatellar area (obesity +/-)
- high-lying patella
- Active extension deficit
- Instability

chronic rupture of patellar tendon

Extensor mechanism graft
autograft or allograft
Gutter ‘s Preparation

Tunnel ‘s Preparation
• 3 horizontal tunnels
• 3 metallic wires

Patellar Fixation : metallic wire (2 or 3)

Graft positioning:
• Impaction into position
• Height of the patella adjusted by varying the position of the tibial allograft component in its gutter
• Intra-operative x-rays +++
Tibial Fixation: metallic wire fixed on a metallic screw post + staples

Extensor mechanism allograft
- Same procedure
- Bigger graft and shorter operative time
- CL knee preservation
- Planification
- Contamination risk
- Preop Sizing (CL knee)
- Slower rehabilitation
- PDS® band augmenting

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Treatment of chronic dislocation of the patellar tendon in Osgood-Schlatter imperfecta with allograft reconstruction

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The Knee

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futures perspectives on TKA
- Technique with synthetic mesh

Hansen’s technique
- Technique with synthetic mesh

Conclusion

Challenging surgery
Prognosis = anatomical restitution