Stiffness after fracture

How I do an Arthroscopic arthrolisis
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DEFINITION
« All knee with a flexion lower than 90° »
Jean Judet

- Flexion limitation (<90°)
- Extension Limitation (=flessum, ?)
- Both in flexion and extension

Stiffness after fracture
Arthroscopy
Where is the problem?
No extra-articular deformation

Stiffness after fracture
What was the story?
Infection ! Always
Bad reduction or no reduction
Rehab problem?
If yes why, pain, fear …

Arthroscopic Arthrolysis

- Jackson 1975
- Conti 1979: 4 failures / 22
- DeHaven 1982: 3/15
- Sprague 1984: 6/24
- Mean Gain 45-55°

I take the time with the patient
=> Provide a typical Orthopaedic information
“It’s going to be long and hard”

- Patient evaluation: motivation, working occupation
- Medical evaluation:
  - bone quality
  - unknown inflammatory disease
  - Infection
- Modesty +++
**Why?**

**Intra-articular fibrosis:**
- Supra-patellar pouch and quadriceps
- Condylar ramps

**Global Capsular retraction**
- Retinaculum (20°)
- Fat pad
- Post capsule

**Anterior stop effect: cut-off**
- Anterior osteochondral Fragment

*Beaufils et al. EMC. Arthlyse arthroscopique du genou*

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**Arthroscopic acces**

**Lack of flexion**

« Anterior »

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**Lack of extension**

« Anterior »

**Flessum cut-off effect**

⇒ Osteochondral Fragment

I do not deal with posterior retraction arthroscopically

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**When?**

Around 3 months

OK up to 6 months

Sometimes more but….

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**Before starting: check-list**

- Infection
- Patient information
- I’m not in Val d’Isere the day after the surgery
- Anesthesiologist and Cathether
- Arthroscopic tools
- Casting
- Manual rehabilitation scheduled

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**What I’m going to do ?**

- Step by step
  1. Exam under GA => What do we really have + pictures
  2. Sub-quad and suprapatellar pouch
  3. Lateral retinaculum section
  4. Condylar ramps
  5. Fat pad
  6. Medial retinaculum
  7. ACL if required

Pictures Post=> +++ Psychologic effect
First step
Find an Anesthesiologist

Catheter

Standard Tool Box

- Tourniquet
- Arthro pump
- Shaver
- Viper
- Mayo ciseaux

32 years old ladie, former fencing french team skiing injury

Patient set-up

- Tourniquet
- Knee positionner
- Catheter ready

Portals and Approaches

1. Work in extension
Liberation under the quad: see the red fibers
Fat pad liberation

Section of the lateral retinaculum

Section of the Medial retinaculum

• Fat pad liberation

Hemostasis and work into the condylar ramp

Mayo ciseux closed
From infero lat to the superolateral

Mayo ciseux closed and open
From infero med to the superomed

Hemostasis and work into the condylar ramp

Mayo ciseux closed
From infero lat to the superolateral

Mayo ciseux open
Below the skin
Control of the hemostasis

Section of the lateral retinaculum

- Fat pad liberation
- Arthroscopic releases for arthrofibrosis of the knee

Patients failed nonsurgical treatment in a series of 25 cases with scarring of the infrapatellar fat pad and patellar tendon with the knee in 30° of flexion.

Following arthroscopy, patients are prescribed a 4- to 6-week return to sport.

Postoperatively, the goal of rehabilitation focuses on establishing a range of motion while preserving joint mobility.

Initially, the focus is on regaining knee flexion, which is related to loss of extension.

Hemostasis and work into the condylar ramp.

Anterior interval release.

Mayo ciseux closed and open.

From infero med to the superomed.

Anterior interval release.

Mayo ciseux closed.

From infero lat to the superolateral.

Hemostasis and work into the condylar ramp.

Anterior interval release.

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Anterior interval release.

Mayo ciseux closed.

From infero lat to the superolateral.

Hemostasis and work into the condylar ramp.

Anterior interval release.
• Spines fracture: hardware removal
• Osteochondral fragment removal
• ACL liberation

Pictures at the end
Psychologic effect +++

Catheter +++

Casting
• Casting in flexion and extension
• Change every six hours during at least 5 days
• Drains+++

Manual Physiotherapy
• 2 hours in fours session every day including the week-end

Results at three months
Experimental proprioceptive rehabilitation program

Results at one year

Tendinous Vibration : « A Proprioceptive fake stimulus»

We can work on the brain input « somesthetic intrusion»

Arc of motion

Complex regional pain syndrome type I (CRPS-I) may result from a mismatch between sensory input and motor output leading to a disorganization of motor programming in cor-

Objective

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The remaining 4 patients served as the controls. A significant decrease in analgesic use occurred in the intervention group.

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Key points

Intra-articular problems and lack of flexion

• Infection
• 3 to 6 months
• Patient information
• Anesthesiologist and cathether: pain+++ 
• Arthroscopic time: 7 steps
• Cast and drain
• Manual rehabilitation