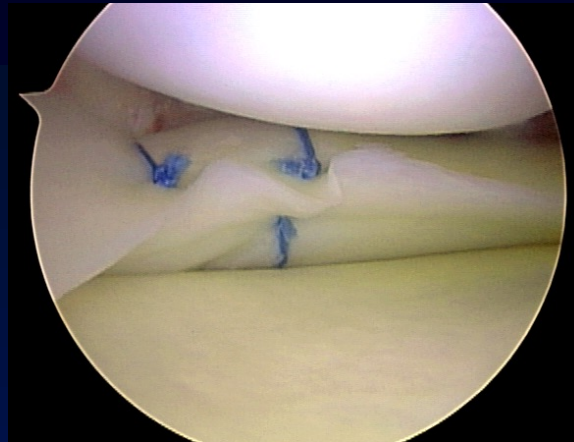


Complications & Iatrogenicity of Meniscal repair



*François Kelberine, Jean Philippe Vivona, Gaspard Fournnier
Aix en Provence- France*

Rate of failure

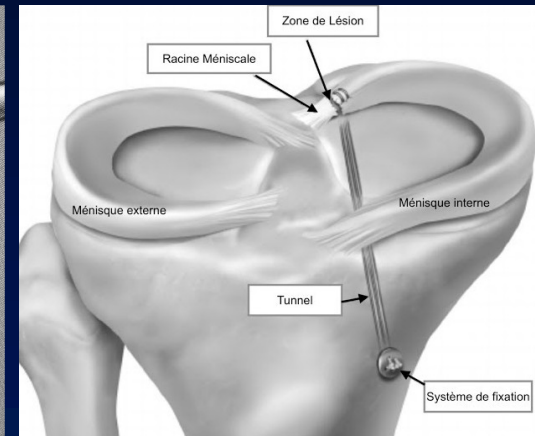
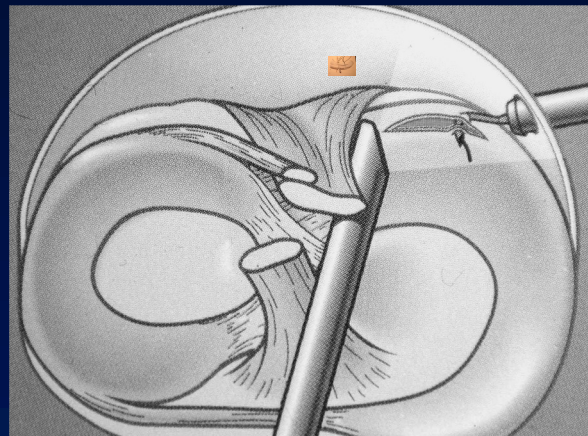
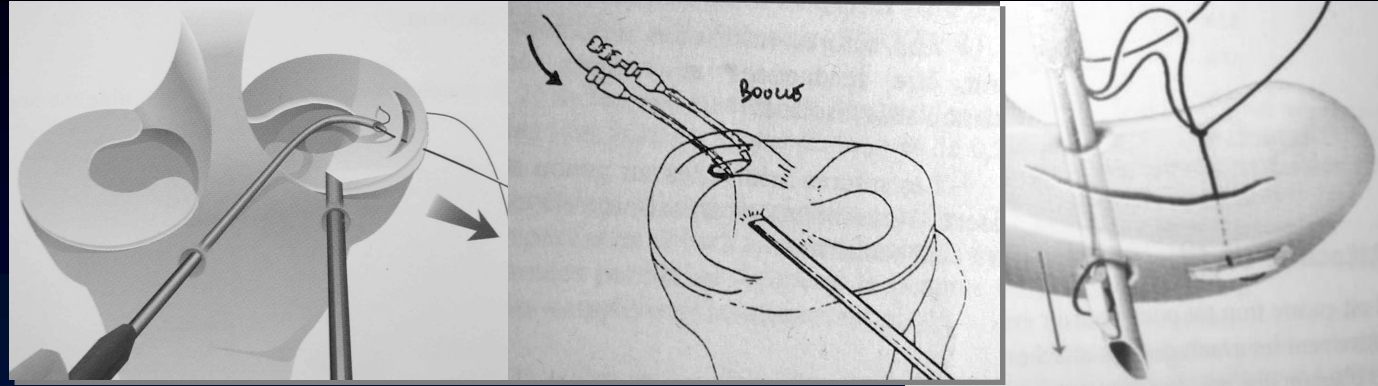
	MM	ML
Stable knee	30%	15%
Unstable knee	15%	8%

- ✓ Healing zone
- ✓ Age



Tehnically challenging

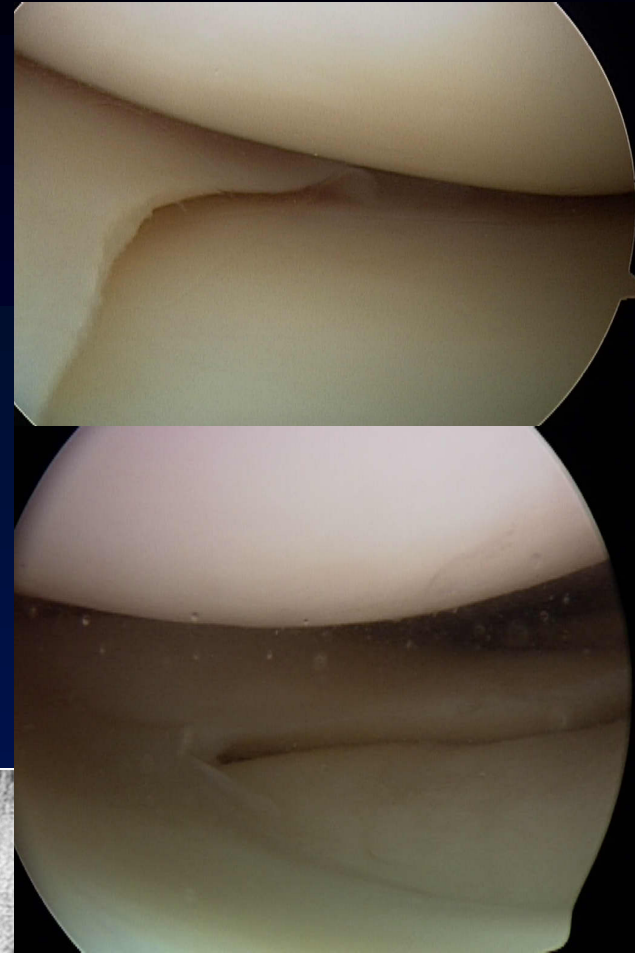
- ✓ Inside Out
- ✓ All Inside
- ✓ Outside In
- ✓ Ramp lesion
- ✓ Root tear



difficulties to expose properly
and fix the lesion anatomically

Tehnically challenging

- ✓ Exposure
 - ✓ Open joint line
 - ✓ MCL pie crusting
-
- ✓ Chronic medial pain (4%)

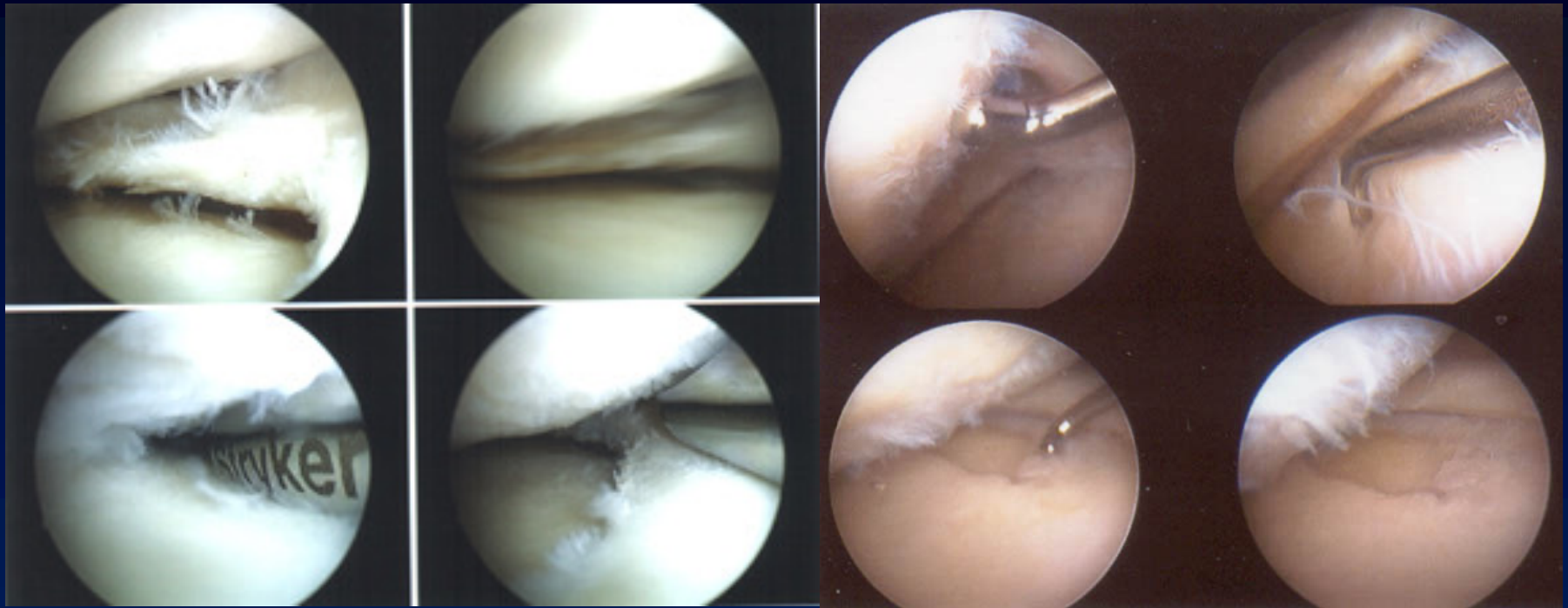


Jones *The Knee* 2009
Kelberine & Meyer *ISAKOS survey* 2009
Fakioglu *KSSTA* 2019



Tehnically tricky

✓ Trephination / synovial abrasion



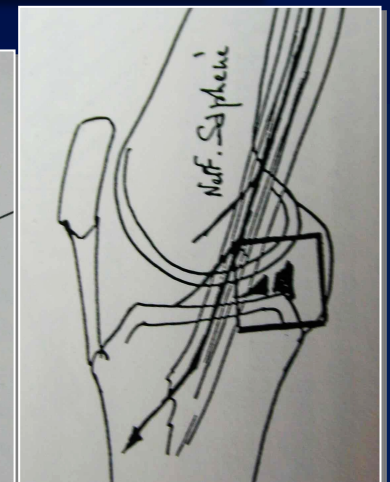
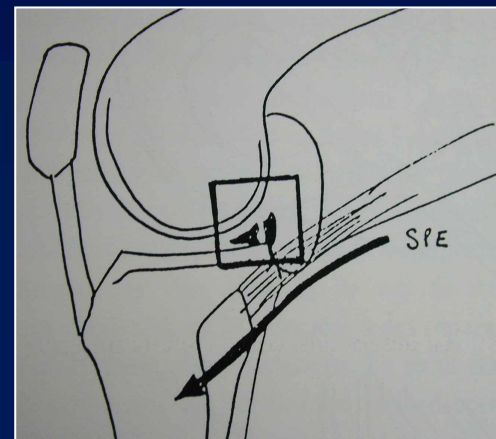
Neurovascular structures @ risk

Makridis *Am J S Med* 2013
Cuellar *Arthroscopy* 2015
Massey *Arthroscopy* 2019
Al Fayyad *J Orthop Surg* 2019
Gupta *KSSTA* 2019

- ✓ Vascular no description
- ✓ Saphenous vein...



- ✓ Neurological
- ✓ Peroneal nerve
- ✓ Saphenous nerve

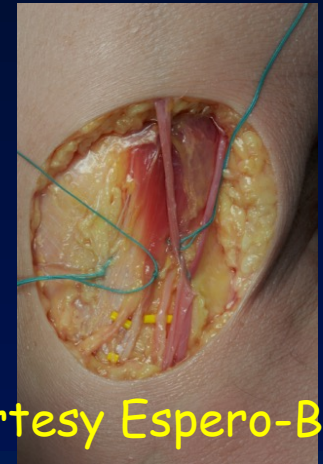


Nerve lesions

Espero-Baena *KSSTA* 2006
Krivich *Arthroscopy* 2010
Spindler *Am J Sport Med* 2011
Gupta *KSSTA* 2019
Kang *KSSR* 2019

✓ Inside out ++ especially medially
22% cadaveric study

✓ Posteromedial portal / ramp

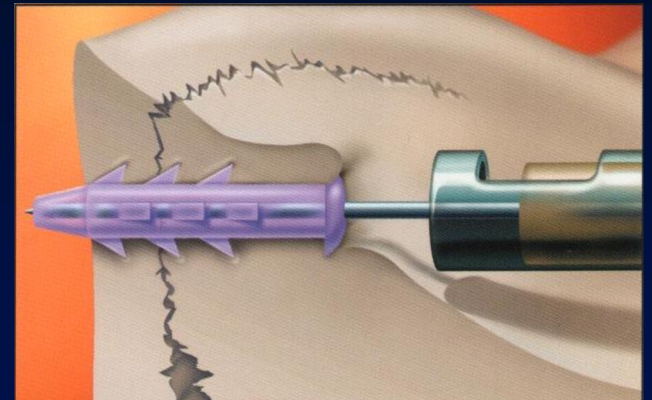
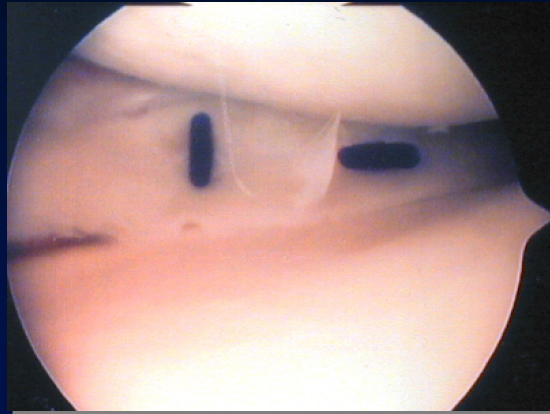


Courtesy Espero-Baena

✓ All inside : depth anchor penetration
max 16 to 20mm (patient's size)

Failure of fixation devices

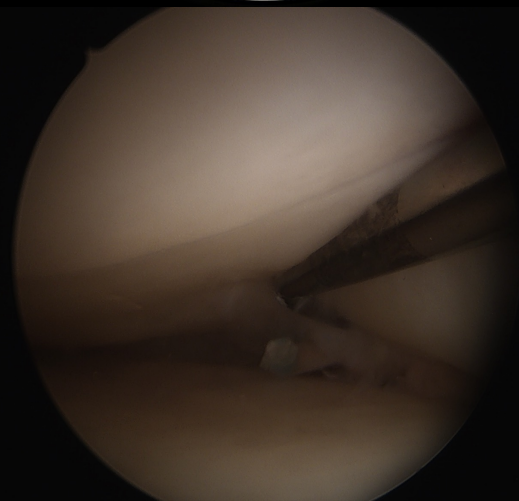
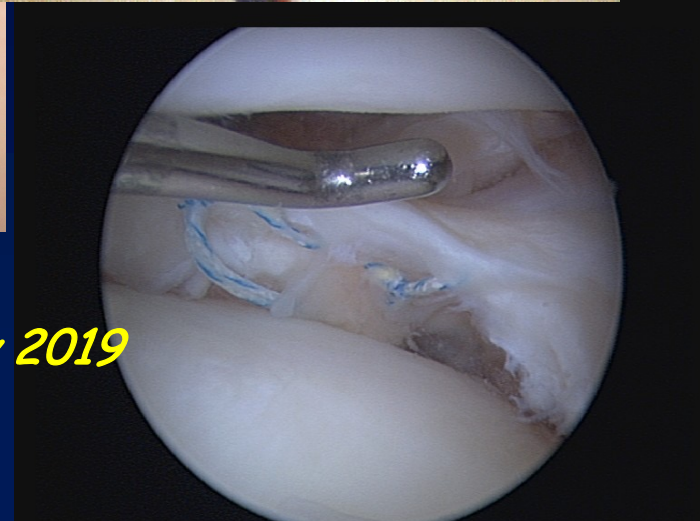
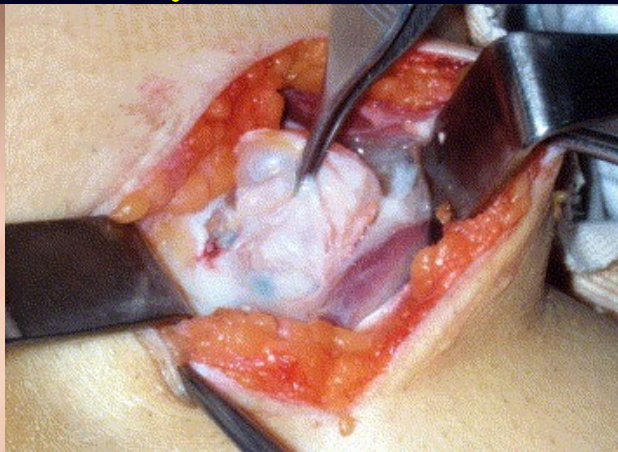
- ✓ First generation not valid anymore (arrow, dart, staples, screws)



- ✓ Implant loosening, device migration, chondral injuries.
- ✓ Foreign body cystic granulomas.

Failure of fixation devices

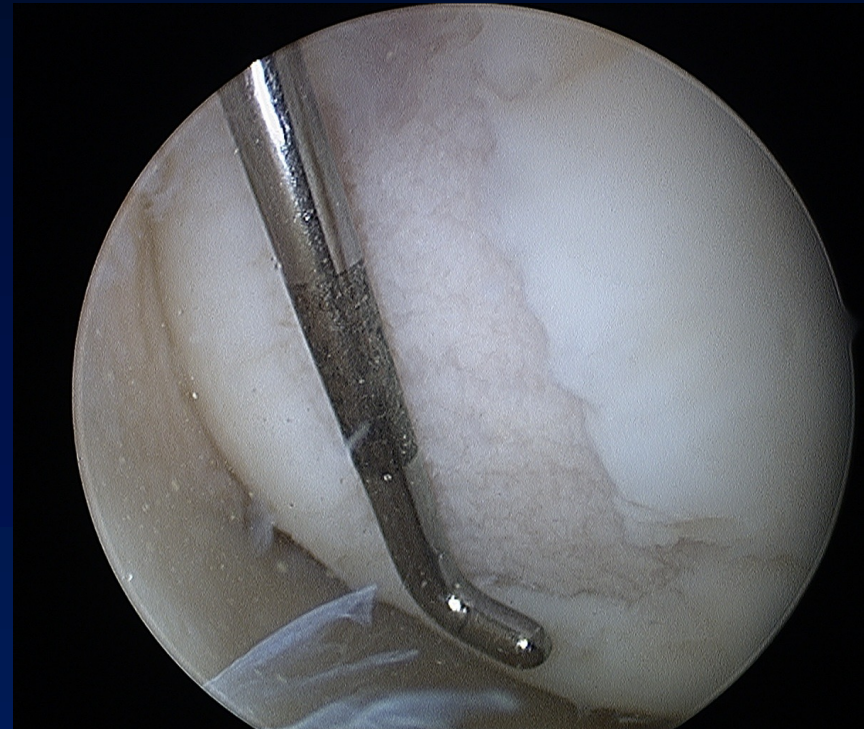
✓ More rarely with new generation



Nishino *Arthroscopy* 2019
Kang *OTSR* 2012

Iatrogenicity!!

- ✓ Despite & due to new devices
- ✓ Cartilage damages

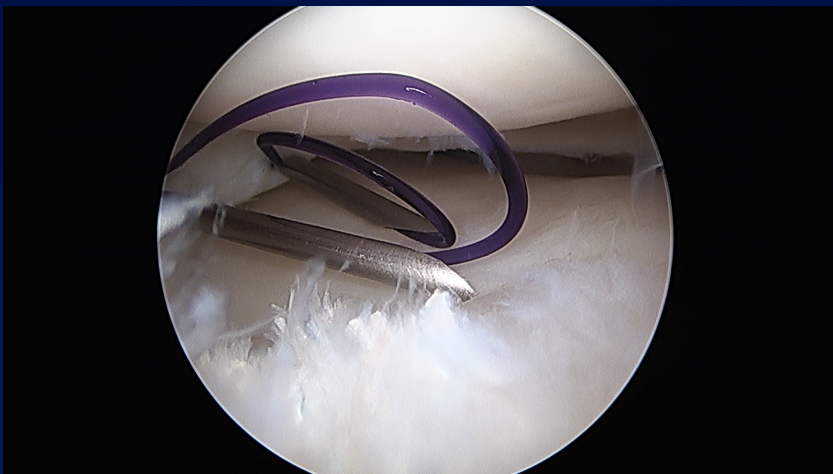
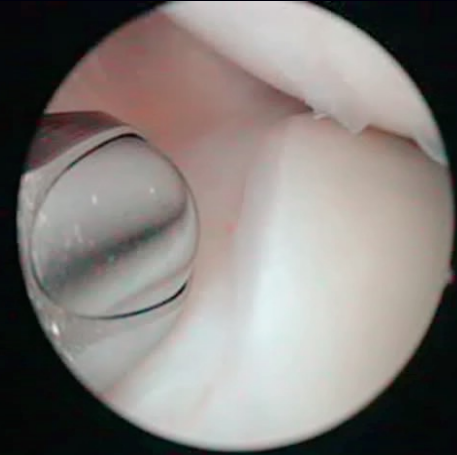


« Arthroscopy »

Cartilages damages

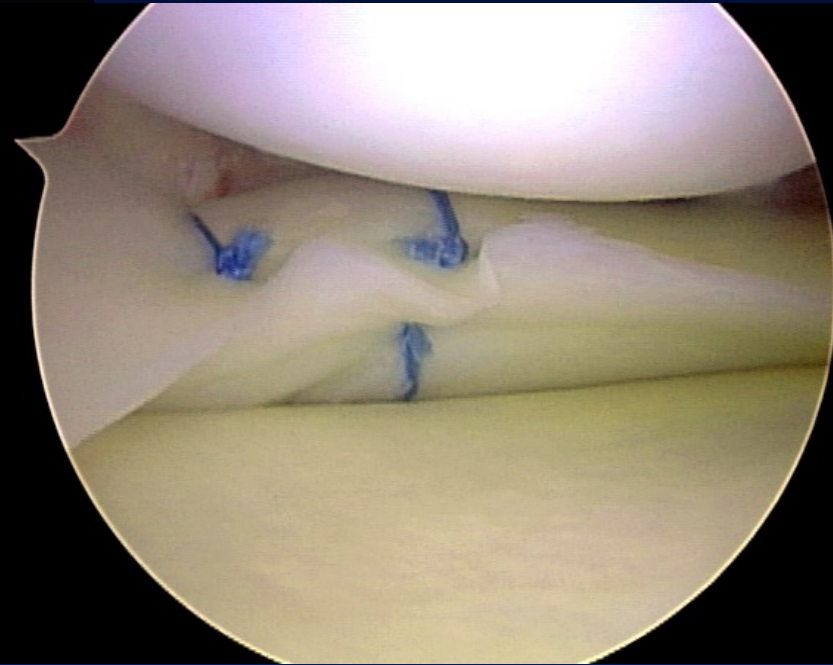
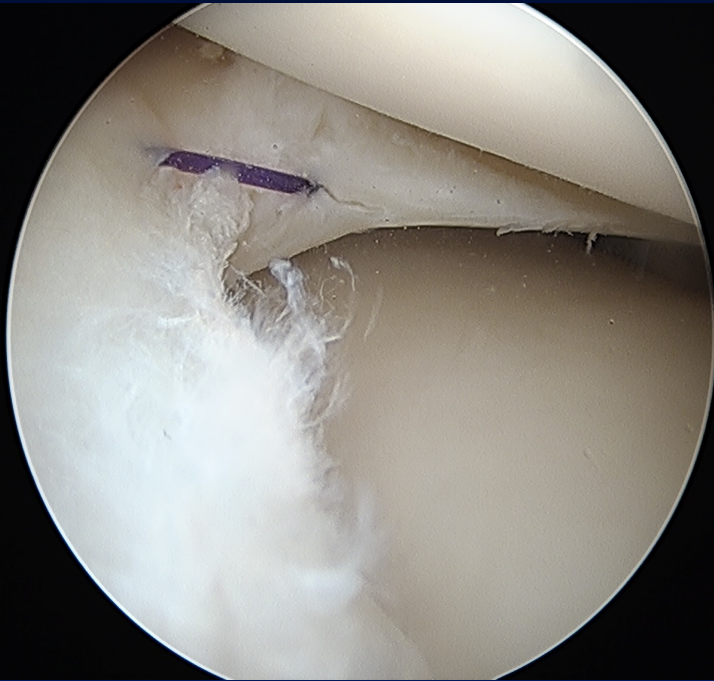
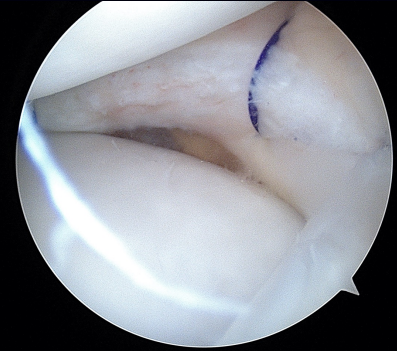
✓ Op time (skills?)

✓ Loosening of implants



What about the suture?

- ✓ Long time onset
- ✓ PDS vs non absorbable



! Save the meniscus !

- ✓ Worldwide trend supported by KOL
- ✓ Based on long term FU > meniscectomy
 - systematic review minimal FU 8y
 - 5 studies = radiographic OA @ 8-16y

Petty & Lubowitz Arthroscopy 2011

- ESSKA consensus
 - Onset worse > arthroscopic resection
 - Repair ASAP

Kopf KSSA 2018

Degenerative Meniscus ??

Resection @ 20 years > OA needing TKR

Aprato Arthroscopy 2021

Repair meta analysis : less OA and TKA

Krivic AJSM 2021

Better long term results but more re
surgery.....unclear

Feeley JAAOS 2018

Symptomatic for acute RR zone tear

Weler Isakos 2021

! but it is degeneration !

✓ General complications is very low

LAI KSSTA 2023

✓ In expert's hands

Table 6.2.1 Major complications reported after meniscal repair procedures

	AANA 1986 [45] retrospective N=3034	AANA 1990 [46,47] prospective N=257	SFA 2003 [28] retrospective N=203	SFA 2003 [28] prospective N=75
Saphenous nerve injury	30	1	4	0
Peroneal nerve injury	6	0	0	1
Vascular injury	3	0	0	0
Cartilage damage	—	—	3	0
Meniscal damage	—	—	1	0
Synovitis	—	—	1	0

✓ Save all menisci? at which price

INDICATIONS, SKILLS

« Primum non nocere »

- ✓ Don't harm
- ✓ Resist to useless trend

