

# PFOA: REVIEW OF THE LITERATURE

JM FAYARD  
Centre Orthopédique Santy  
Lyon  
France

# Treatment options

- **Conservative treatment**

Arthroscopic lateral release

ATT transfer

Lateral facetectomy

- **Joint replacement:**

Total knee replacement

Patellofemoral replacement

Conservative treatment

# Arthroscopic lateral release



## ***Alemdaroğlu: Knee 2008***

35 patients

Sign improvement at 3 months FU but not at 6,12, 24 months

## ***Aderinto: Arthroscopy 2002***

50 patients 31 months FU

4 revision by TKA

41% unsatisfied

## ***Shea: Arthroscopy 1992***

Worser results with advanced OA

Impredictable evolution  
Early degradation

# ATT transfer



- Maquet:

95% good & very good results

*Maquet: Rev Rhum. 1963*

31% good & very good results

*Engbretsen: Acta Orthop Scand. 1989*

- ***SOFCOT 2003:***

Maquet procedure should be abandoned due to high rate of complications (21%!!!)

# ATT transfer

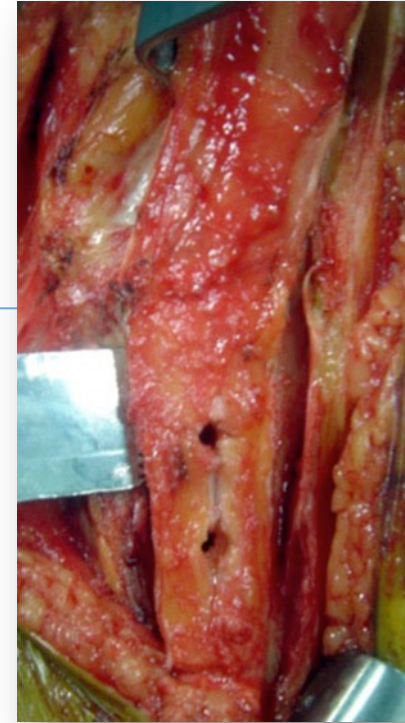
- Anteromedialization (Fulkerson)

55 y/o 77 months FU

19 knees

63% rated good-Excellent

1 TKA



*Carofino: J Knee Surg 2008*

# ATT transfer

- Medial transfer (Elmslie- Trillat)

Good functional results (IKS)

3 times less complications than Maquet procedures

2 TKA



***SOFCOT 2003***

# ATT transfer

- Medial transfer (Elmslie- Trillat)

20 months FU

Significant improvement of functional score

*"CT scan should be strongly recommended before surgery to be able to quantify the need for tibial tubercle transfer."*

***Becker: Clin Orthop Relat Res 2008***





# Lateral Facetectomy

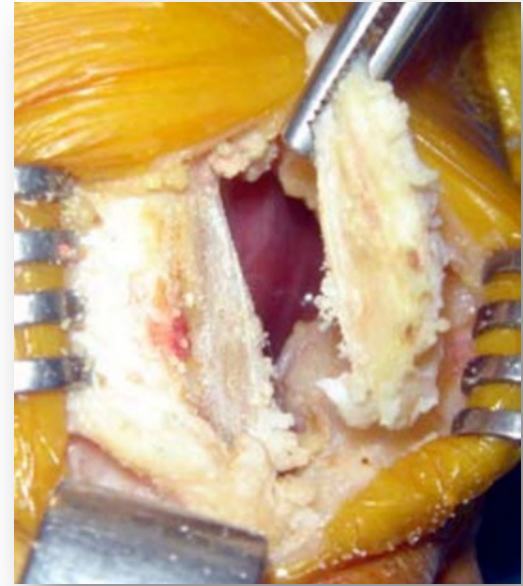


- Limited morbidity (arthroscopy) & Low rate of complication

*Jones: Orthopedics 2008*

*Yercan: Clin Orthop Relat Res 2005*

# Lateral Facetectomy



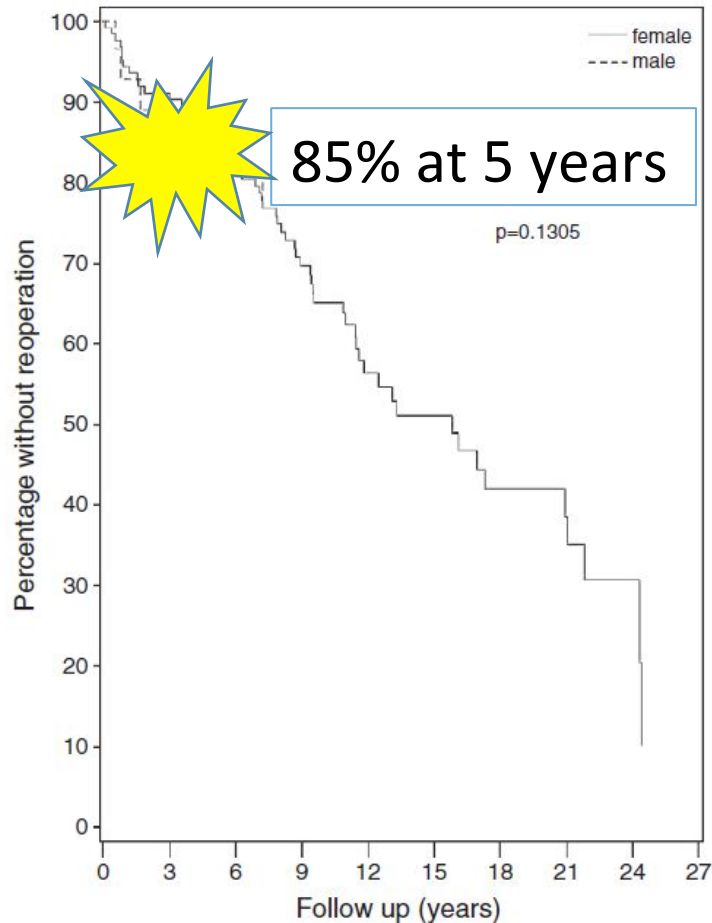
- Significant improvement on Pain & knee scores (Kujala, KSS)

*Paulos: Arthroscopy 2008*

*Yercan: Clin Orthop Relat Res 2005*

*Montserrat: KSSTA 2013*

# Lateral Facetectomy



- **Results stable with time:**

168 knees 11 years FU

37% revision

Average revision time: 8 years

*Wetzels: Knee 2012*



# Joint Replacement

# Total knee replacement



- Good functional results
- 94-100% survivorship at 5-7 years FU
- Longer hospital stay & blood loss than PFA

***Laskin: Clin Orthop 1999***

***Mont: JBJS Am 2002***

***Parvizi: Clin Orthop 2001***

***Am J Orthop 2010***

# Patellofemoral Arthroplasty

- Variable outcomes:

- Implant design:

**Inlay prosthesis:**

45% good/very good results at 8 years FU

75% good/very good results at 11 years FU



***Tauro: JBJS 2001***

***Cartier: Clin Orthop 2005***

# Patellofemoral Arthroplasty

- Variable outcomes:

- Implant design:

**Inlay prosthesis:**

42% revision at 4 years FU ( 11% TKA)

35% revision at 19 months



*Smith: Knee 2002*

*Board: Arch Orthop Trauma Surg 2004*

# Patellofemoral Arthroplasty

- Variable outcomes:
  - Implant design:



## **Inlay prosthesis:**

62%-84% survivorship at 10 years

58%-69% at 16-20 years

***Gadayne: RCO 2008***

***Van Jonbergen: J Arthroplasty***

***Argenson: Clin Orthop 2005***

***Van Jonbergen: J Arthroplasty***



# Patellofemoral Arthroplasty

- Variable outcomes:

- Implant design:

**Onlay prosthesis:**

84%-100% good/very good results at 5 years FU

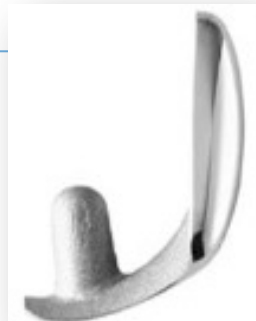
*Starks: JBJS Br 2009*

*Leadbetter: Semin Arthroplasty 2009*

*Ackroyd: JBJS Br 2007*

82% good/very good results at 12 years FU

*Hernigou: Int Orthop 2014*



# Patellofemoral Arthroplasty



- Variable outcomes:

- Implant design:

Higher reoperation & revision rate with inlay prosthesis

*Van der List: Knee 2017*

# Patellofemoral Arthroplasty

- Variable outcomes:

Patellar instability ( Inlay prosthesis +++)

Influenced by:

- rotation of femoral component
- Q angle



***Gadayne: RCO 2008***

# Patellofemoral Arthroplasty

- Variable outcomes:

OA progression:

Complication n°1

22%-28% at 5 years FU

Less OA progression on FT compartment when associated to trochlear dysplasia



***Starks: JBJS Br 2009***

***Ackroyd: JBJS Br 2007***

***Argenson: Clin Orthop 2005***

***Nicol: Knee 2006***

# Conclusion

- Many surgical options in the treatment of PFOA
- Conservative treatment should be proposed in young & active patient:
  - Lateral facetectomy: treatment of choice
  - May be associated with ATT transfer (TT-TG)

# Conclusion

- TKA:

Good functional results but higher morbidity than PFA

- PFA:

- More reproducible results with onlay prosthesis
- Consider OA progression on FT compartment (trochlear dysplasia)

# THANK YOU



[www.centre-orthopedique-santy.com](http://www.centre-orthopedique-santy.com)