ACUTE PATELLAR DISLOCATION
POINTS TO BE CONSIDERED

1- ACUTE TRAUMA (FIRST EPISODE)

2- PRESENCE OF PREDISPOSITIVE FACTORS

3- PRESENCE OF OSTEOCHONDRODAL FRACTURES
POINTS TO BE CONSIDERED

1- ACUTE TRAUMA (FIRST EPISODE)

2- PRESENCE OF PREDISPONENT FACTORS

3- PRESENCE OF OSTEOCHONDRAL FRACTURES
POINTS TO BE CONSIDERED

1- ACUTE TRAUMA (FIRST EPISODE)

2- PRESENCE OF PREDISPONENT FACTORS

3- PRESENCE OF OSTEOCHONDRAL FRACTURES
HYPOTHESIS

ACUTE DISLOCATION OF THE PATELLA

1- SURGICAL TREATMENT IN THE PRESENCE OF AN OSTEOCHONDRAL FRACTURE

2- NON-SURGICAL TREATMENT WITH BRACE FOLLOWED FOR PHYSIOTHERAPY FOR ALL OTHER PATIENTS
LITERATURE
Ahmad et al
Immediate surgical repair of the medial patellar stabilizers for acute patellar dislocation  A review of eight cases
AJSM 28, 2000, pp 804-810

8 PATIENTS
4 MALES - 4 FEMALES
MEDIUM AGE - 32 YEARS

DISTAL RUPTURE OF THE MPFL
RUPTURE OF THE VMO

ALL CASES

SURGICAL TREATMENT IN ALL CASES
Ahmad et al
Immediate surgical repair of the medial patellar stabilizers for acute patellar dislocation  A review of eight cases
AJSM 28, 2000, pp 804-810

8 PATIENTS
4 MALES - 4 FEMALES
MEDIUM AGE - 32 YEARS

DISTAL RUPTURE OF THE MPFL
RUPTURE OF THE VMO

↓

ALL CASES

NO DISLOCATIONS
LIMITATION OF FLEXION IN 4 CASES
**8 PATIENTS**

4 MALES - 4 FEMALES
MEDIUM AGE - 32 YEARS

DISTAL RUPTURE OF THE MPFL
MEDIAL RUPTURE

ALL CASES

**CONCLUSION**

VMO AND LFPM REPAIR SHOULD BE DONE
2 GROUPS
MINIMUM FOLLOW UP - 2 YEARS

1- FIRST DISLOCATION - 125 PATIENTS
   MEDIUM AGE 16 YEARS (9-67) 52% FEMALE GENDER
   61% WITH SPORTS ACTIVITY

2- PREVIOUS DISLOCATION OR SUBLUXATION - 64 PATIENTS
   MEDIUM AGE 21 YEARS (8-65) 70% FEMALE GENDER
   47% WITH SPORTS ACTIVITY
2 GROUPS

MINIMUM FOLLOW UP - 2 YEARS

1- FIRST DISLOCATION - 125 PATIENTS
   17% NEW EPISODES OF DISLOCATION

2- PREVIOUS DISLOCATION OR SUBLUXATION - 64 PATIENTS
   49% NEW EPISODES OF DISLOCATION
2 GROUPS

MINIMUM FOLLOW UP - 2 YEARS

1- FIRST DISLOCATION - 125 PATIENTS
17% NEW EPISODES OF DISLOCATION

2- PREVIOUS DISLOCATION OR SUBLUXATION - 64 PATIENTS
49% NEW EPISODES OF DISLOCATION

MRI

NO CORRELATION BETWEEN MEDIAL RETINACULUM RUPTURE AND NEW EPISODES OF DISLOCATION
2 GROUPS

MINIMUM FOLLOW UP - 2 YEARS

1- FIRST DISLOCATION - 125 PATIENTS

17% NEW EPISODES OF DISLOCATION

2- PREVIOUS DISLOCATION OR SUBLUXATION - 64 PATIENTES

49% NEW EPISODES OF DISLOCATION

MRI

TREND TOWARD LOWER RISK OF SUBSEQUENT DISLOCATION WHEN THERE WAS MEDIAL RETINACULUM OR MPFL RUPTURE
Sillanpaa et al
Arthroscopic surgery for primary traumatic patellar dislocation
a prospective, nonrandomized study comparing patients treated with and without
acute arthroscopic stabilization with a median 7-year follow up
AJSM 36, 2008, pp 2301-2309

76 PATIENTS
MEDIUM FOLLOW UP - 7 YEARS

30 PATIENTS → ARTHROSCOPIC REPAIR

46 PATIENTS → WITHOUT REPAIR
Sillanpaa et al
Arthroscopic surgery for primary traumatic patellar dislocation
a prospective, nonrandomized study comparing patients treated with and without
acute arthroscopic stabilization with a median 7-year follow up
AJSM 36, 2008, pp 2301-2309

76 PATIENTS
MEDIUM FOLLOW UP - 7 YEARS

30 PATIENTS ➔ ARTHROSCOPIC REPAIR

46 PATIENTS ➔ WITHOUT REPAIR

RESULTS
23% RE-DISLOCATION RATE IN THE GROUP WITHOUT REPAIR
19% RE-DISLOCATION RATE IN THE GROUP WITH REPAIR

p=0.84
Sillanpaa et al
Arthroscopic surgery for primary traumatic patellar dislocation
a prospective, nonrandomized study comparing patients treated with and without
acute arthroscopic stabilization with a median 7-year follow up
AJSM 36, 2008, pp 2301-2309

76 PATIENTS
MEDIUM FOLLOW UP - 7 YEARS

30 PATIENTS ➔ ARTHROSCOPIC REPAIR

46 PATIENTS ➔ WITHOUT REPAIR

CONCLUSION

ARTHROSCOPIC REPAIR OF THE MEDIAL RETINACULUM DOES NOT IMPROVE
PATELLAR STABILITY NOR DECREASES THE RE-DISLOCATION RATE
126 PATIENTS
MEDIUM FOLLOW UP – 8.1 YEARS

63 PATIENTS → CONSERVATIVE TREATMENT

20 PATIENTS → DIAGNOSTIC ARTHROSCOPY

37 PATIENTS → MEDIAL RECONSTRUCTION

6 PATIENTS → OSTEOCHONDRAL FIXATION
126 PATIENTS
MEDIUM FOLLOW UP – 8.1 YEARS

RESULTS

26% RE-DISLOCATION RATE

85% EXCELLENT / GOOD RESULTS (LYSHOLM)

71% SUBJECTIVE GOOD RESULTS
126 PATIENTS
MEDIUM FOLLOW UP – 8.1 YEARS

RESULTS
NO DIFFERENCES AMONG GROUPS RELATED TO

- RE-DISLOCATION RATE
- RE-OPERATION
- LEVEL OF ACTIVITY
- CLINICAL OR FUNCTIONAL RESULTS
126 PATIENTS
MEDIUM FOLLOW UP – 8.1 YEARS

26% RE-DISLOCATION RATE
85% EXCELLENT / GOOD RESULTS
71% SUBJECTIVE GOOD RESULTS

CONCLUSION

CONSERVATIVE TREATMENT SEEMS TO BE THE CHOICE FOR ACUTE PATELLAR DISLOCATION
Stefancin, JJ & Parker, RD
First-time Traumatic Patellar Dislocation
A Systematic Review
CORR 455, 2007 pp 93-101

SYSTEMATIC REVIEW OF 70 PAPERS
LEVELS I-IV

HOW TO TREAT AND DIAGNOSE ACUTE PATELLAR DISLOCATION
ACCORDING TO EVIDENCE BASED MEDICINE
SYSTEMATIC REVIEW OF 70 PAPERS
LEVELS I-IV

HOW TO TREAT AND DIAGNOSE ACUTE PATELLAR DISLOCATION
ACCORDING TO EVIDENCE BASED MEDICINE

OSTEOCHONDRAL FRACTURE RATE — 24.3%

MEDIUM RE-DISLOCATION RATE — 48%
SYSTEMATIC REVIEW OF 70 PAPERS
LEVELS I-IV

HOW TO TREAT AND DIAGNOSE ACUTE PATELLAR DISLOCATION
ACCORDING TO EVIDENCE BASED MEDICINE

KNEE JOINT ASPIRATION

1- INCREASES COMFORT

2- HELPS IN DIAGNOSIS

3- LARGE VOLUME OF HEMARTROSIS SUGGESTS LESION OF THE MEDIAL STABILIZERS OR OSTEOCHONDRAL FRACTURE

4- PRESENCE OF FAT INDICATES OSTEOCHONDRAL FRACTURE
First-time Traumatic Patellar Dislocation
A Systematic Review
CORR 455, 2007 pp 93-101

SYSTEMATIC REVIEW OF 70 PAPERS

5 PAPERS COMPARE CONSERVATIVE TO SURGICAL TREATMENT

ALL OF THEM RECOMMEND INITIAL CONSERVATIVE TREATMENT

ARTHROSCOPY INDICATED WHEN THERE IS OSTEOCHONDRAL FRACTURE (ARTHROSCOPIC OR OPEN REPAIR INDICATED)

CONSERVATIVE AND SURGICAL TREATMENT HAVE SIMILAR RESULTS AFTER 2 YEARS OF FOLLOW UP

MAJOR COMPLICATION ONLY AFTER SURGICAL TREATMENT
Sillanpaa et al
Treatment with and without initial stabilizing surgery for primary traumatic patellar dislocation
A prospective randomized study
JBJS 91A, 2009, pp 263-273

40 PATIENTS
MEDIUM AGE - 20 YEARS
MEDIUM FOLLOW UP - 7 YEARS

22 PATIENTS → TREATMENT WITH BRACE

18 PATIENTS → SURGICAL STABILIZATION

MRI SHOWING HEMARTROSIS, MEDIAL RETINACULUM AND MPFL RUPTURE IN ALL PATIENTS
Sillanpaa et al
Treatment with and without initial stabilizing surgery for primary traumatic patellar dislocation
A prospective randomized study
JBJS 91A, 2009, pp 263-273

40 PATIENTS
MEDIUM AGE - 20 YEARS
MEDIUM FOLLOW UP - 7 YEARS

RESULTS

RE-DISLOCATION

6 IN THE NON-OPERATED GROUP
0 IN THE OPERATED GROUP

PAINFUL SUBLUXATION

4 IN THE NON-OPERATED GROUP
2 IN THE OPERATED GROUP
Sillanpaa et al
Treatment with and without initial stabilizing surgery for primary traumatic patellar dislocation
A prospective randomized study
JBJS 91A, 2009, pp 263-273

40 PATIENTS
MEDIUM AGE - 20 YEARS
MEDIUM FOLLOW UP - 7 YEARS

RESULTS
MEDIUM KUJALA SCORE

90 POINTS IN THE NON-OPERATED GROUP
91 POINTS IN THE OPERATED GROUP
Sillanpaa et al
Treatment with and without initial stabilizing surgery for primary traumatic patellar dislocation
A prospective randomized study
JBJS 91A, 2009, pp 263-273

40 PATIENTS
MEDIUM AGE - 20 YEARS
MEDIUM FOLLOW UP - 7 YEARS

CONCLUSION
LOWER RE-DISLOCATION RATE IN THE OPERATED GROUP
CLINICAL AND FUNCTIONAL RESULTS QUITE SIMILAR IN BOTH GROUPS
NO BENEFITS WERE SEEN IN SURGICAL TREATMENT IN A LONG PERIOD OF FOLLOW UP
33 PATIENTS

GROUP I - 16 PATIENTS  CONSERVATIVE TREATMENT
GROUP II - 17 PATIENTS  SURGICAL TREATMENT

RE-DISLOCATION RATE

8 PATIENTS GROUP I
0 PATIENTS IN GROUP II
33 PATIENTS

GROUP I - 16 PATIENTS                              CONSERVATIVE TREATMENT
GROUP II - 17 PATIENTS                              SURGICAL TREATMENT

KUJALA SCORE

GROUP I       69 POINTS
GROUP II      92 POINTS
Camanho et al
Conservative versus surgical treatment for repair of the medial patellofemoral ligament in acute dislocations of the patella
Arthroscopy 25, 2009, pp 620-635

33 PATIENTS

GROUP I - 16 PATIENTS  CONSERVATIVE TREATMENT
GROUP II - 17 PATIENTS  SURGICAL TREATMENT

CONCLUSION

SURGICAL TREATMENT GAVE BETTER RESULTS
Sillanpää et al.
Femoral Avulsion of the Medial Patellofemoral Ligament After Primary Traumatic Patellar Dislocation Predicts Subsequent Instability in Men
A Mean 7-Year Nonoperative Follow-Up Study
AJSM 37: 1513-1521, 2009

COHORT STUDY – LEVEL OF EVIDENCE III

53 MALE PATIENTS
TREATED NON-SURGICALLY WITH THE SAME METHOD
INICIAL LOCATION OF MPFL TEAR EVALUATED BY MRI

FEMORAL AVULSION - 35 PATIENTS
PATELLAR AVULSION - 7 PATIENTS
MIDSUBSTANCE TEAR - 11 PATIENTS
Sillanpää et al.
Femoral Avulsion of the Medial Patellofemoral Ligament After Primary Traumatic Patellar Dislocation Predicts Subsequent Instability in Men
A Mean 7-Year Nonoperative Follow-Up Study
AJSM 37: 1513-1521, 2009

COHORT STUDY- LEVEL OF EVIDENCE III

42 PATIENTS
SEEN AT MEAN 7-YEAR FOLLOW UP

PATELLAR INSTABILITY - 15 PATIENTS

13 PATIENTS - FEMORAL AVULSION

1 PATIENT - MIDSUBSTANCE TEAR

1 PATIENT - PATELLAR AVULSION

p=0.01
Sillanpää et al.
Femoral Avulsion of the Medial Patellofemoral Ligament After Primary Traumatic Patellar Dislocation Predicts Subsequent Instability in Men
A Mean 7-Year Nonoperative Follow-Up Study
AJSM 37: 1513-1521, 2009

COHORT STUDY- LEVEL OF EVIDENCE III

42 PATIENTS
SEEN AT MEAN 7-YEAR FOLLOW UP

PATELLAR REDISLOCATION - 9 PACIENTES

8 PATIENTS - FEMORAL AVULSION

1 PATIENT - MIDSUBSTANCE TEAR

p=0.05
KUJALA SCORE

**FEMORAL AVULSION** 90 POINTS

**PATELAR AVULSION** 91 POINTS

**MIDSUBSTANCE TEAR** 96 POINTS

\[ p = 0.76 \]

**PROPORTION OF PATIENTS WHO REGAINED THEIR PREINJURY ACTIVITY LEVEL WAS SMALLER AMONG THOSE WITH FEMORAL AVULSION**
CONCLUSION

MPFL AVULSION AT FEMORAL INSERTION INDICATES SUBSEQUENT PATELLAR INSTABILITY

LOCATION MUST BE TAKEN IN ACCOUNT WHEN PLANNING TREATMENT
SUMMARY

1- SURGICAL TREATMENT SHOULD BE CONSIDERED:

- WHEN THERE IS AN OSTEOCHONDRAL FRACTURE

- WITH FEMORAL AVULSION???
SUMMARY

2- RECENT PAPERS SHOWING LESSER RECURRENT RATE WITH SURGICAL TREATMENT

- 1 OF THEM WITH SIMILAR CLINICAL RESULTS
  Sillanppaa et al

- 1 OF THEM WITH BETTER CLINICAL RESULTS WITH SURGICAL TREATMENT
  Camanho et al
SUMMARY

3- Recurrence rate supposed to be higher in femoral avulsions

Sillanppaa et al
SUMMARY

THERE IS NO CLEAR EVIDENCE IN LITERATURE THAT SURGICAL TREATMENT IS SUPERIOR TO NON SURGICAL TREATMENT, EVEN THOUGH RECURRENCE RATE IS LOWER IN SURGICAL TREATMENT
THANKS

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