



ACL Study Group Sardinia 2004

Chondral and meniscal injuries associated to the chronic ACL deficient knee

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Objectives

- Correlate the prevalence and severity of chondral and meniscal injuries associated to the ACL deficient knee and its correlation with time
- Correlate the prevalence and type of injuries in menisci and articular surfaces



Materials and Methods

Inclusion criteria:

- Cases: 03/2002 to 04/2003
- > 3 months of ACL injury
- Primary reconstruction
- Filled surgical report form
- Outerbridge Classification

C.N.R. Ortopedia del Deporte y Artroscopia **Reporte quirúrgico: Cirugía de Rodilla**

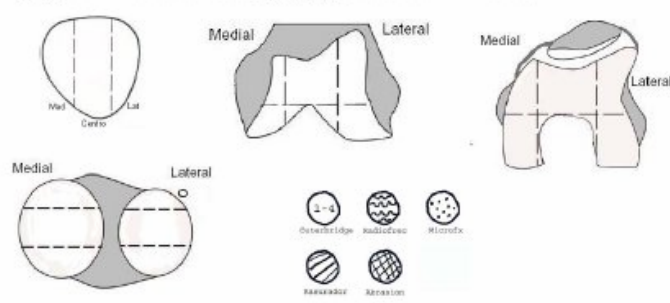
Nombre: _____ Edad: _____
No. Expediente: _____ Teléfono: _____
Fecha de cirugía: _____ Tiempo de evolución: _____
Operación realizada: _____
Lado operado: Derecha Izquierda Bilateral (llenar un reporte por cada rodilla)
Cirujano: Almazán Encalada Cruz Ibarra Pérez J Otro: _____
Ayudantes: _____
Anestesia: General Regional Local Sedación Isquemia: No Sí; Tiempo: _____
Resultados de escalas: Lysholm _____ Tegner _____

• **COMPARTIMIENTO ANTERIOR**

Condromalacia Inestabilidad Hiperpresión lateral Artrosis OCD Plica
Tx lesiones condrales: Vapor Rasurador Microfracturas Abrasión Sin Tx
Liberación retináculo lateral: Radiofrecuencia Tijera Plicatura medial: Abierta Térmica Artroscópica
 Fulkerson Otro: _____
Observaciones: _____

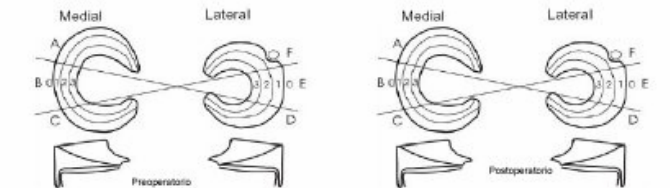
• **COMPARTIMIENTO FEMOROTIBIAL**

Condromalacia Artrosis OCD Osteonecrosis Fx Osteocondral Fx espina tibial
Tx lesiones condrales: Radiofrecuencia Rasurador Microfracturas Abrasión Sin Tx
 OATS _____ Osteosíntesis: _____



• **MENISCOS**

Meniscectomía: Pinzas Rasurador Radiofrecuencia Otro: _____ Reparación: D-F F-D
Tipo de suturas: _____ # Sutures: _____ T-D; Tipo de implante: _____ # Implantes: _____





Statistical Analysis

- SPSS 10.0 for Windows
- T Student average comparisons for independent groups
- Pearson r for quantitative variable correlation
- Rho Spearman and Tau b Kendall for ordinal variables
- Lineal regression analysis for variance and covariance



Results

- 113 patients
- 92 male and 21 female
- 30.9 years of age (16-53)
- Time since injury: 30.8 months (3-144)
- 60 right and 53 left knees



Results

Chondral injuries

- **Medial femoral condyle 25 (22.12%)**
- Patella 21 (18.58%)
- Lateral femoral condyle 19 (16.81%)
- Medial tibial plateau 13 (11.5%)
- Lateral tibial plateau 15 (13.27%)
- Trochlea 3 (2.6%)



Chondral Injuries

Loc.	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Total
MFC	-	7	15	3	25
Patella	-	14	6	1	21
LFC	-	6	10	3	19
LTP	2	9	4	-	15
MTP	1	8	1	3	13
Trochlea	-	1	2	-	3
Total	3	45	38	10	96



Results

Medial menisci injury

65%

Lateral menisci injury

46%

Complex / Degenerative

30

Complex / Degenerative

24

Radial / Longitudinal

26

Radial / Longitudinal

24

Bucket handle

18

Torn discoid

3

Total

74

Bucket handle

1

Total

52

n=113



Results: Time

- Longitudinal and buckle handle tears correlated with less time since injury
- Complex and degenerative MM tears correlated with longer time since injury ($p=0.006$)



Results

- No evident correlation between time and LM tears patterns of injury ($p=0.50$)
- MFC Outerbridge II correlated with longitudinal MM tears ($p=0.03$)
- MFC Outerbridge III and IV correlated with complex MM tears ($p=0.03$)



Results

- No significant correlation between injuries in lateral compartment
- Only 14 meniscal repairs (11.1%), with time since injury less than 12 months
- 68.14% menisectomies



Discussion

- Average time since injury longer than most published series
- All patients had at least 1 associated injury
- Evolution time correlated with more severe chondral injuries for MFC



Discussion

- Complexity of MM tears correlated with time
- LM injuries show tendency of severity correlated with time, but with no statistical significance



Discussion

- Severity of MFC injuries correlated with MM severity injuries
- Age may interact in severity of associated injuries
 - Pre-existing intrarticular pathology?



Conclusion

- In Mexico and Latin America it's very common to have this long evolution times preop
- High incidence of associated injuries in the untreated chronic ACL deficient knee



Conclusion

- Time since injury and age at the time of injury play a definite role in associated injuries
- In my setting this study supports the early surgical treatment of the symptomatic ACL deficient knee



Questions

- Associated injuries may play a role in posttraumatic osteoarthritis of the knee?
 - Chondral injuries
 - 68.14% menisectomies
- Results of the the ACL reconstructions?
- Fate of these young patients?



Thank You

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