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Impact Of Sports Activity Level And Surgery Timing On Concomitant Meniscus Lesions In Anterior Cruciate Ligament Injuries: A Specialized Sports Medicine Hospital Experience

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Faculty Disclosure Information

- No potential conflict of interest in relation to this presentation
- I will not be discussing any off-label or unapproved drugs or products



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Background

Concomitant injuries
are present
in **60% of ACL injuries**



- ✓ Limited number of studies reported sports-specific mechanisms and associated injuries, in addition to the effect of time on the concomitant injuries
- ✓ **Comparative analysis** between **registered and non-registered athletes** remains largely absent from the discourse



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- Limited number of studies reported sports-specific mechanisms and associated injuries, in addition to the effect of time on the concomitant injuries

Methods

Retrospective cohort study of prospectively collected data

Primary ACL reconstruction at Aspetaar

≤30 days post-injury

>30 days post-injury



- ✓ To investigate the prevalence of **ACL concomitant meniscus and cartilage injuries**
- ✓ to compare the distribution of the associated injuries between **registered and non-registered athletes** across various sports



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Methods



All Primary ACL Reconstructions at Aspetar 2018-2022

- ✓ >16 years
- ✓ Primary ACLR



- ✓ Previous surgery
- ✓ Surgery delay >6 months from injury
- ✓ Missing surgical reports and patients with incomplete data



584 patients were included



252
Registered athletes



332
Non-Athletes



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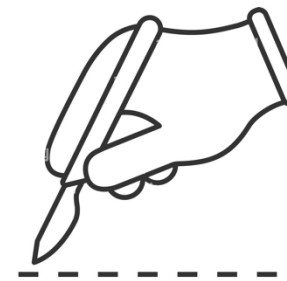
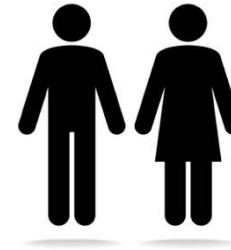
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Results

Patients' characteristics

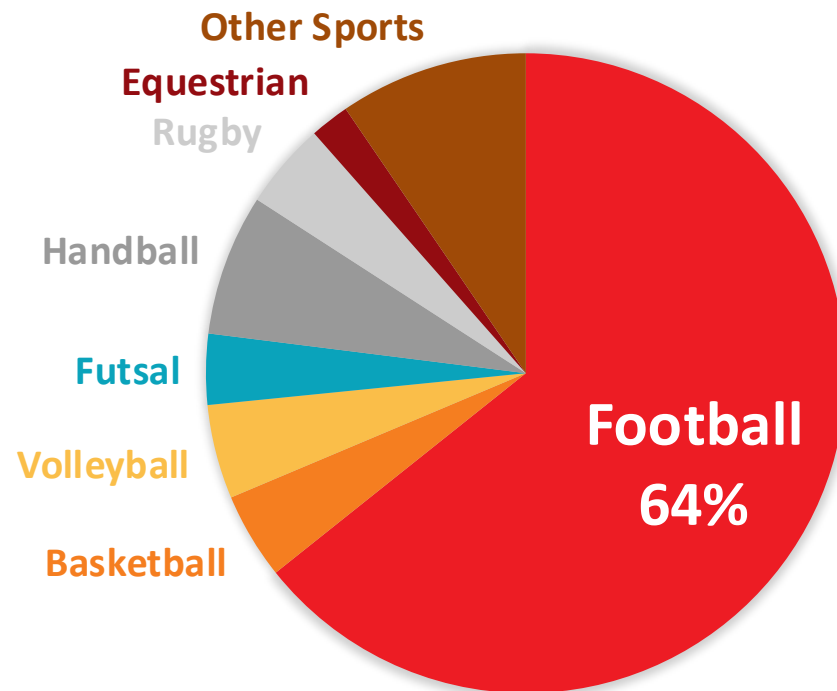
584 patients (541 ♂; 43 ♀)

Age: 27.2 ± 8.3 y



Median injury-to-surgery time: 2.5 months
(IQR 1.2-6.8)

- ✓ Registered athletes → 1.3 (IQR 0.7-2.9) months
- ✓ Non-registered athletes → 4.5 (IQR 1.7-11.3) months



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Results

Prevalence of meniscal lesions

55.1%



Lateral meniscus lesions

34.2%



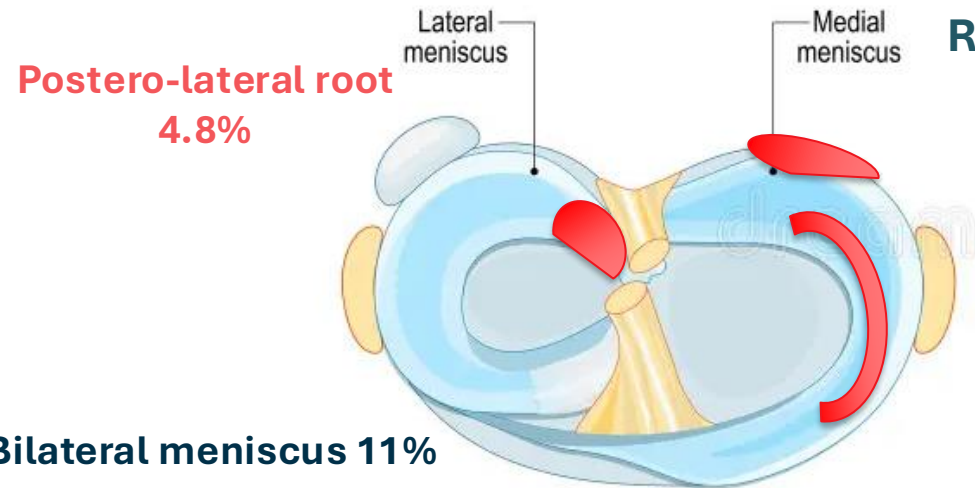
Higher prevalence of in athletes
(38.9% vs 30.7% - $p = .035$)

Medial meniscus lesions

32.2%

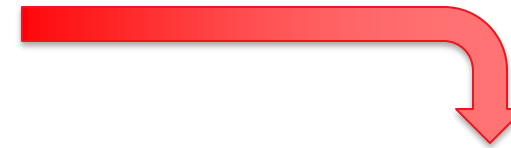


Higher rate in non-athletes



RAMP 11.3%

Medial bucket
handle 3%



Acute setting

(19.4% vs 9.1%, $p = 0.002$)

Footballers

(21.7% within 30 days vs. 5.4%
beyond 30 days, $p = 0.002$)



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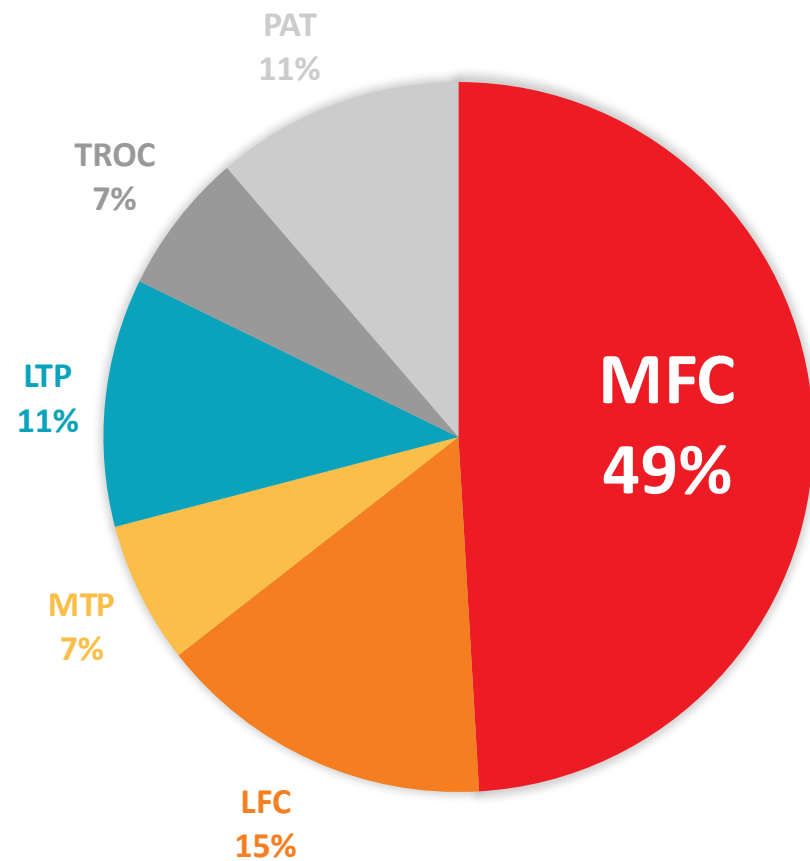


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Results

Prevalence of cartilage lesions

15.9%



✓ Sports activity

✓ injury-to-surgery time



No influence in cartilage injury



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Conclusions

In the ACL reconstruction population at Aspetar



✓ **Football players** → higher incidence of RAMP lesions
→ higher rate of acute medial meniscus injuries

✓ **Registered athletes** → higher overall rate of lateral meniscal tears

✓ **Non-registered athletes** → greater overall rate of medial meniscal tears



the importance of tailored injury
management strategies based on
athlete type and surgical timing



References

1. Hantouly AT, Ahmed AF, Fermin TM, Macchiarola L, Sideris V, Papakostas E, Hooghe P, Al-Khelaifi K, Olory B, Zikria B. Short-term outcomes of anterior cruciate ligament reconstruction with or without lateral tenodesis or anterolateral ligament reconstruction: a retrospective cohort. *Int Orthop*. 2023 Dec;47(12):2991-2999. doi: 10.1007/s00264-023-05931-6.
2. Pruneski JA, Heyworth BE, Kocher MS, Tavabi N, Milewski MD, Kramer DE, Christino MA, Yen YM, Micheli LJ, Murray MM, Gilreath L, Kim A, Murray J, Kiapour AM. Prevalence and Predictors of Concomitant Meniscal and Ligamentous Injuries Associated With ACL Surgery: An Analysis of 20 Years of ACL Reconstruction at a Tertiary Care Children's Hospital. *Am J Sports Med*. 2024 Jan;52(1):77-86. doi: 10.1177/03635465231205556.
3. Mansori AE, Lording T, Schneider A, Dumas R, Servien E, Lustig S. Incidence and patterns of meniscal tears accompanying the anterior cruciate ligament injury: possible local and generalized risk factors. *Int Orthop*. 2018 Sep;42(9):2113-2121. doi: 10.1007/s00264-018-3992-x.
4. Gracia G, Cavaignac M, Marot V, Mouarbes D, Laumonerie P, Cavaignac E. Epidemiology of Combined Injuries of the Secondary Stabilizers in ACL-Deficient Knees: Medial Meniscal Ramp Lesion, Lateral Meniscus Root Tear, and ALL Tear: A Prospective Case Series of 602 Patients With ACL Tears From the SANTI Study Group. *Am J Sports Med*. 2022 Jun;50(7):1843-1849. doi: 10.1177/03635465221092767.
5. Nicholls M, Ingvarsson T, Briem K. Younger age increases the risk of sustaining multiple concomitant injuries with an ACL rupture. *Knee Surg Sports Traumatol Arthrosc*. 2021 Aug;29(8):2701-2708. doi: 10.1007/s00167-021-06538-3.
6. Matava MJ, Gibian JT, Hutchinson LE, Miller PE, Milewski MD, Pennock AT; PLUTO Study Group; Kocher MS. Factors Associated With Meniscal and Articular Cartilage Injury in the PLUTO Cohort. *Am J Sports Med*. 2023 May;51(6):1497-1505. doi: 10.1177/03635465231164952.



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