



79th



International
Scientific
Conference of
the University
of Latvia

First experience of postoperative MRI following arthroscopic primary anterior cruciate ligament repair in Latvia

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Background, aim and methods

Although the gold standard for repairing a knee anterior cruciate ligament (ACL) rupture is graft replacement, in the last two years surgeons in Latvia have started to do arthroscopic primary suturing of the ACL.

Primary repair is only used in patients with proximal ligament rupture and good outcome is associated with minimally invasive techniques and early postoperative mobilization.

Aim:

To evaluate short-term MRI postoperative findings – ACL integrity and maturation.
The future goal is to compare the MRI findings during year 1 and year 2.

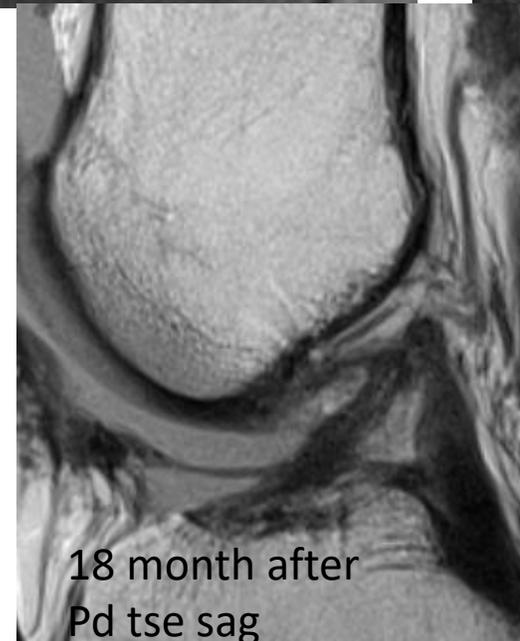
Methods:

A retrospective search was performed in the database of the surgeon for patients who underwent arthroscopic primary ACL repair

Evaluation of postoperative MRI images – ACL continuity (continuous or not continuous) and maturation (signal intensity (SI) compare to PCL).

Results

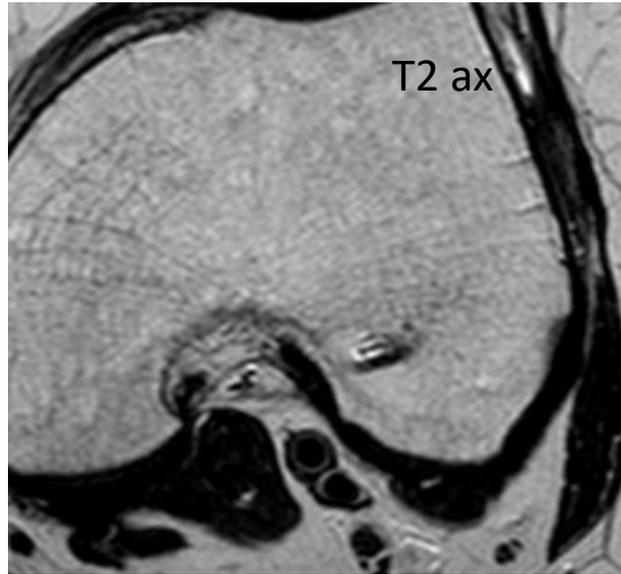
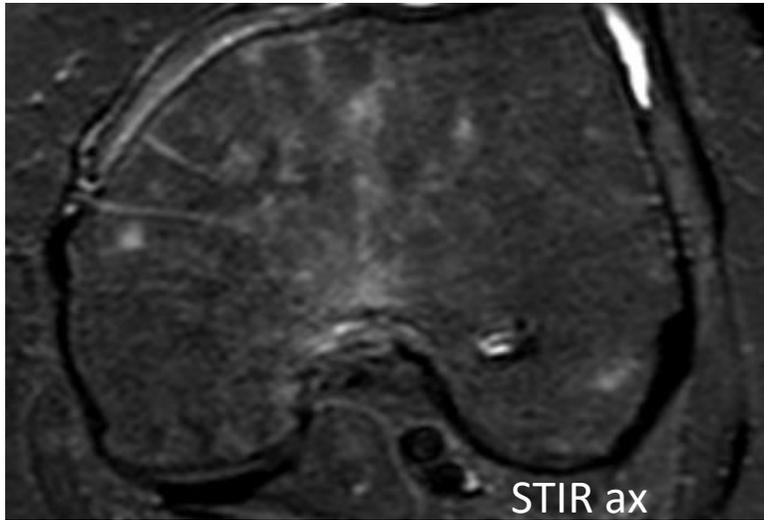
- From 2018–2020 25 patients underwent primary ACL repair, 7 postoperative MRIs from 5 patients were included
- The mean age was 38 years
- The surgery-MRI interval range: 1–14 months
- Within one year of surgery, ligaments were hyperintense in 100%, which may be mistaken for rerupture.



Results

Additional ligament fixation with internal brace was used in all the studied patients.

Due to its small size, there will be no or minimal bone swelling around it, which makes fixation less noticeable.



Conclusion

- For a correct radiological evaluation of ACL, it is important to know:
 - the patient's history
 - the time interval after the operation
 - clinical finding - whether the knee movements are stable
- The MR sequence pd tse sagittal and axial is recommended for ACL continuity assessment, but pd fs sagittal – for maturation assessment

Thank you for your attention!