

Bidirectional evaluation for the lateral meniscal extrusion after repairing isolated longitudinal tear

Akira Tsujii¹, Seira Sato², Tomoki Ohori³, Tatsuo Mae⁴,
Kazutaka Kinugasa⁵, Yasukazu Yonetani⁶, Masayuki
Hamada⁷, Ken Nakata⁸

¹Sports Medical Biomechanics, Osaka University Graduate School of Medicine, ²Sports Medical Science, Osaka University Graduate School of Medicine, ³Dept. Orthopaedics Surgery, Osaka University Graduate School of Medicine, ⁴Osaka Yukioka College of Health Science, ⁵Dept. Sports Orthopaedics, Osaka Rosai Hospital, ⁶Dept. Sports Orthopaedics, Hoshigaoka Medical Center, ⁷Dept. Orthopaedic Surgery, Seifu Hospital, ⁸Medicine for Sports and Performing Arts, Osaka University Graduate School of Medicine

Conflict of Interest (COI) Disclosures

Presenter: Akira Tsujii

Affiliation: Osaka University Graduate School of Medicine

I have no COI regarding this presentation.

Meniscal extrusion on magnetic resonance image (MRI)

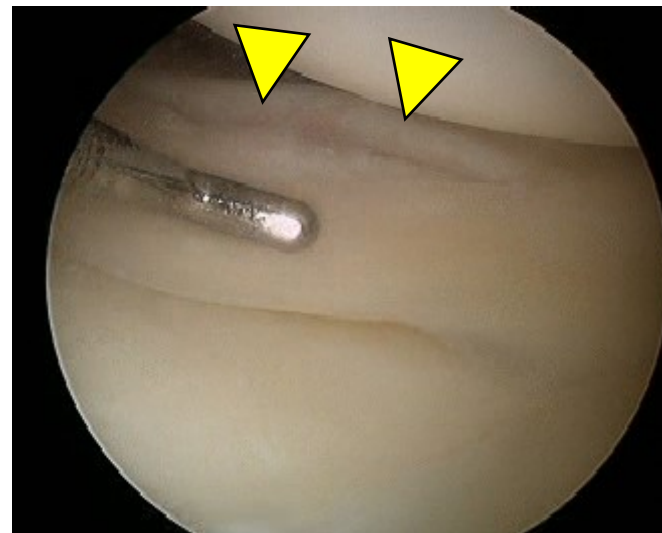
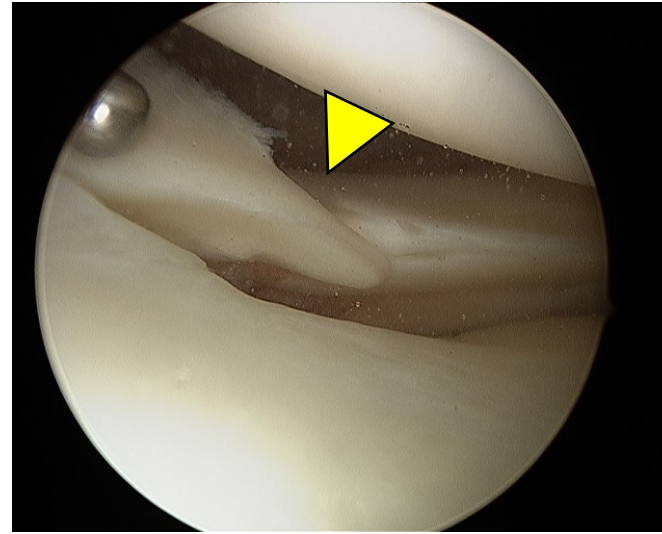
- External displacement from edge of the tibial plateau
- Associated with cartilage injury or osteoarthritis^{1,2}
- Evaluated and discussed
 - Mainly in **medial** meniscus

How about **lateral** meniscus?



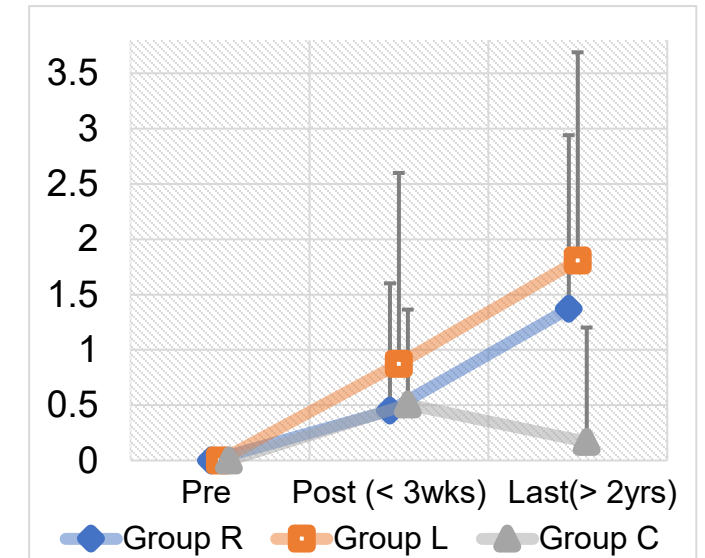
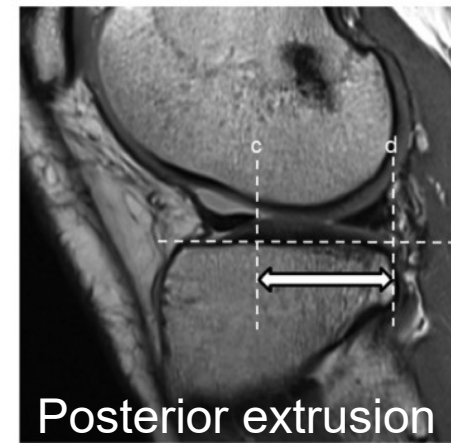
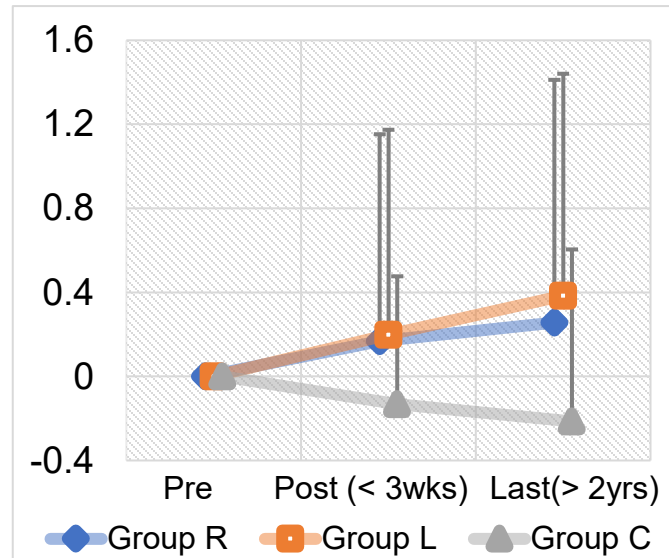
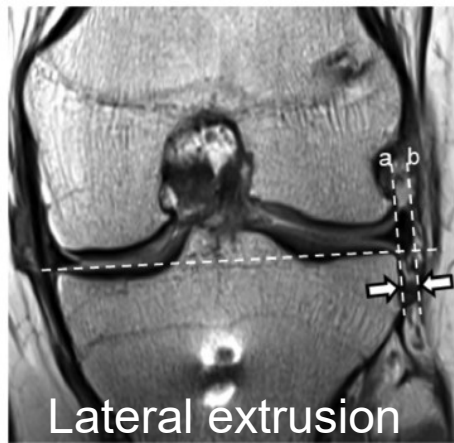
Lateral meniscus (LM) injury concomitant with ACL injury

- Radial/flap tears
 - 7~12%³
- Longitudinal tears
 - 6~20%⁴⁻⁶



Meniscal extrusion after ACL reconstruction (ACLR) and LM repair

- Radial tear (group R), longitudinal tear (group L), intact (group C)



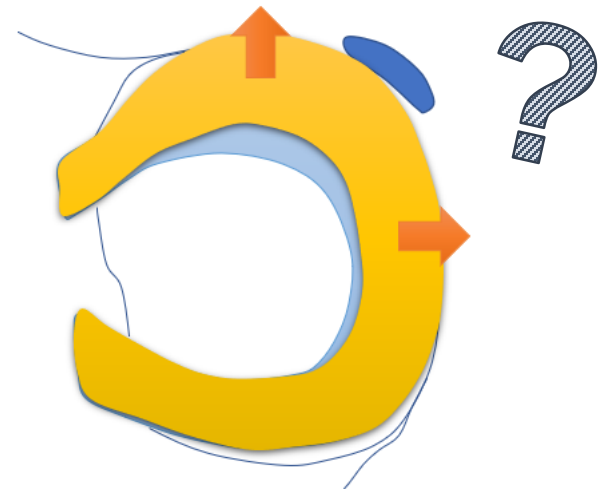
Extrusion progressed over time

Ref. 7

- However, ACLR may alter meniscus position.

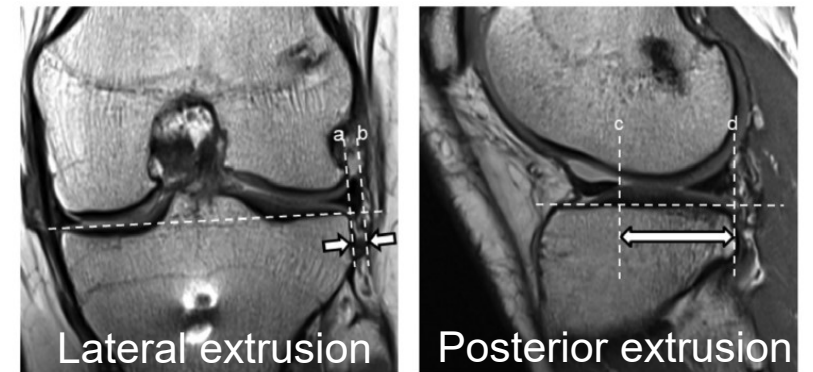
Purpose

- To evaluate meniscal extrusion of the lateral meniscus on MRI after repairing **isolated longitudinal tear** with inside-out technique, and to evaluate time course changes in a short period of time.



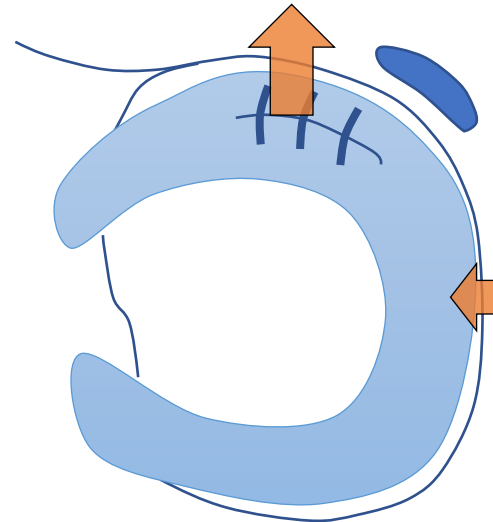
Methods

- 12 patients with isolated LM injury underwent inside-out repair
 - Inclusion
 - Non-locked LM on preoperative MRI
 - MRI exam at 2 weeks and 6 months postoperatively
- MRI evaluations
 - Measured at 3 time points
 - Pre, post 2 weeks/6months
 - Changes of the extrusion (Δ)
(preoperative values as the baseline)



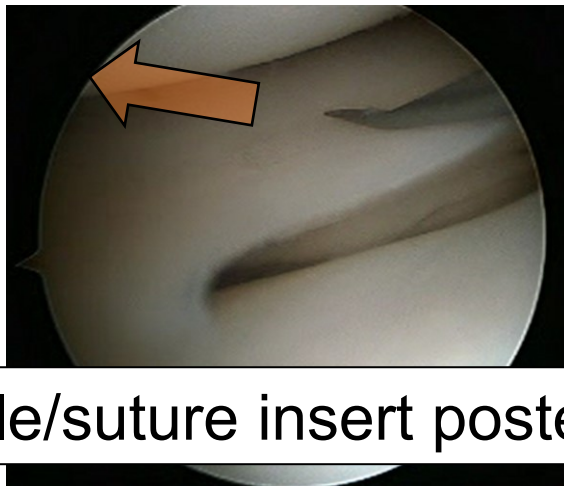
Results: Δ Extrusion (ext.)

	Pre \rightarrow 2 weeks	Pre \rightarrow 6 months
Δ Lateral ext. (mm)	-0.2 \pm 0.8	-0.4 \pm 0.7
Δ Posterior ext. (mm)	0.8 \pm 1.6	1.7 \pm 1.6

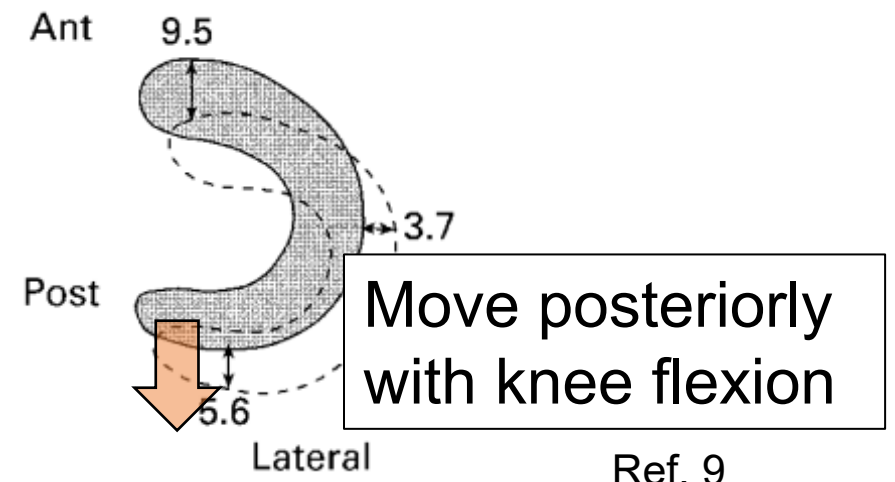


Discussion

- Meniscal extrusion of the LM progressed over time, especially in **posterior extrusion**.
- Posterior extrusion progressed probably because of ...
 - Repair technique
 - Dynamic mobility



Needle/suture insert posteriorly



Discussion

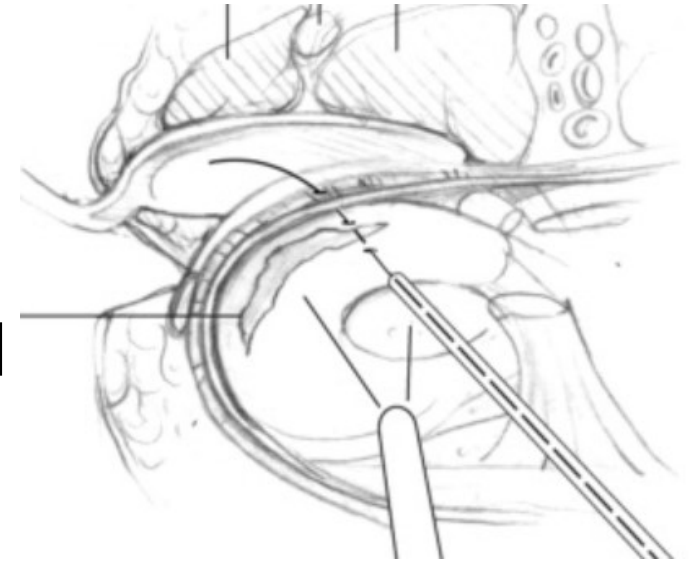
- Inside-out repair technique: a gold standard

- Henning CE. *Orthopedics*. 1983

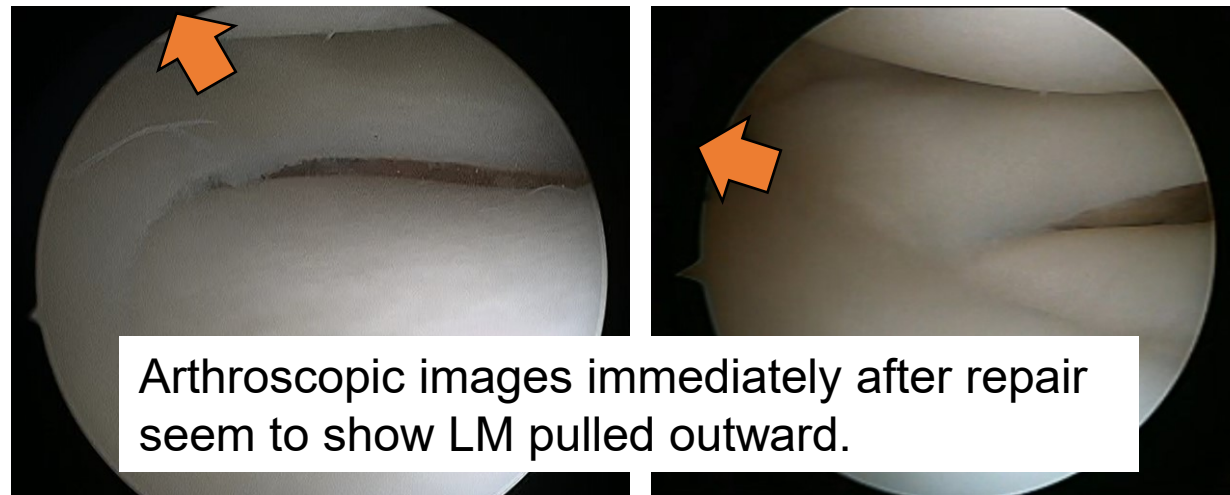
- Pros and Cons

- Pros: easy suture control and promote bleeding from capsule

- Cons: tightened against the capsule and **may affect the extrusion**



Ref. 10



Limitations

- Few patients
- Short period of time
- No PROMs
- Small amount of changes

Conclusion

- **Posterior extrusion** increased immediately after inside-out repair and it progressed at 6 months postoperatively, while lateral extrusion had not changed.

References

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