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All inside suture for wide split tear of lateral meniscus

Akihiro TSUCHIYA

Kenji TAKAHASHI Ichiro YAMAURA

Funabashi Orthopaedic Hospital Ciba JAPAN

Kosuke HYAKUTAKE

Hyakutake Orthopaedi Hospital Saga JAPAN



Faculty Disclosure Information

- Nothing to disclosure according to this presentation



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Materials

(2018-2024)

- 12knees male 4 (bil knee 1) female (retear 1)
- Age at op. 14~56yrs (mean 31.5)
- Normal LM 7 knees(after LM tomy 2) discoid 5
- Follow up term 6 m~50m (mean 27m)

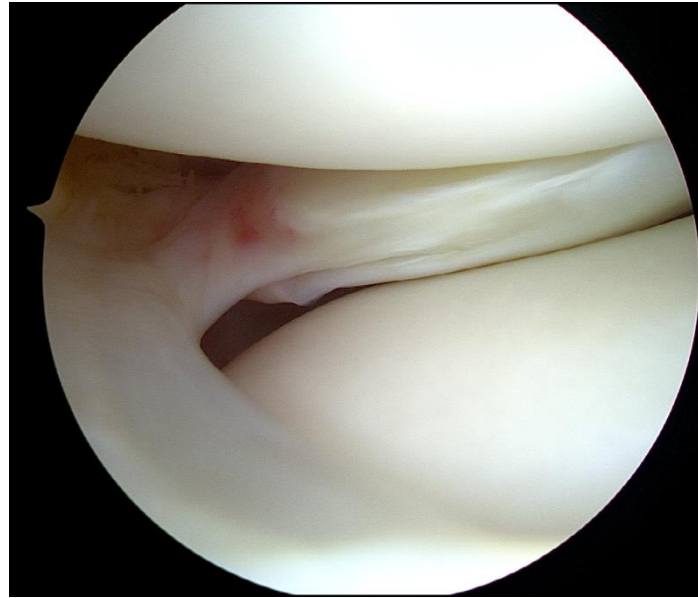


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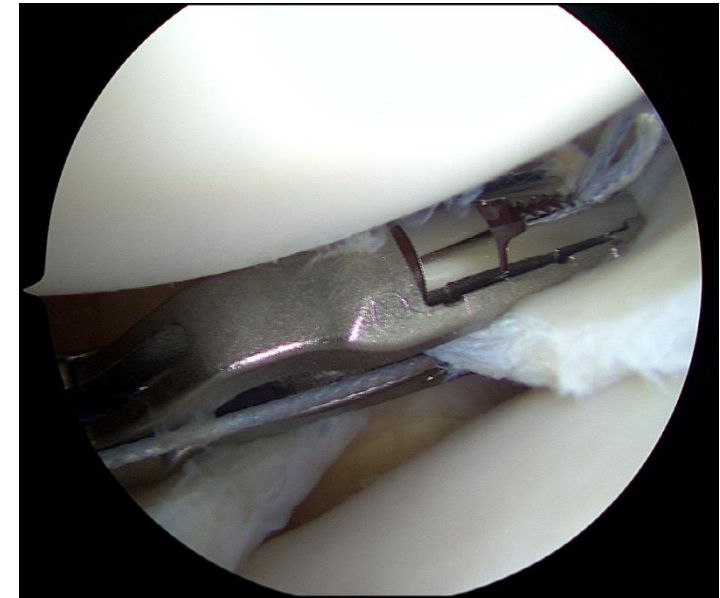


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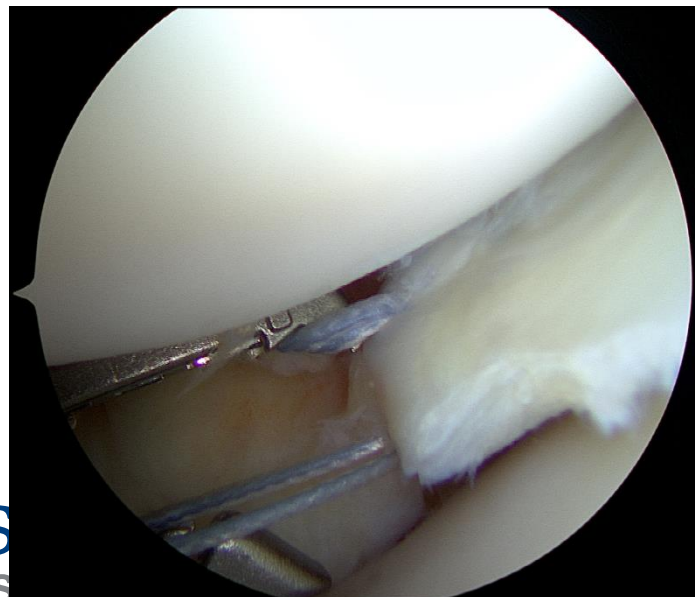
Procedure 1



Wide split torn LM



Pass tread using Fast pass mini



Pierce using Meniscal Mender

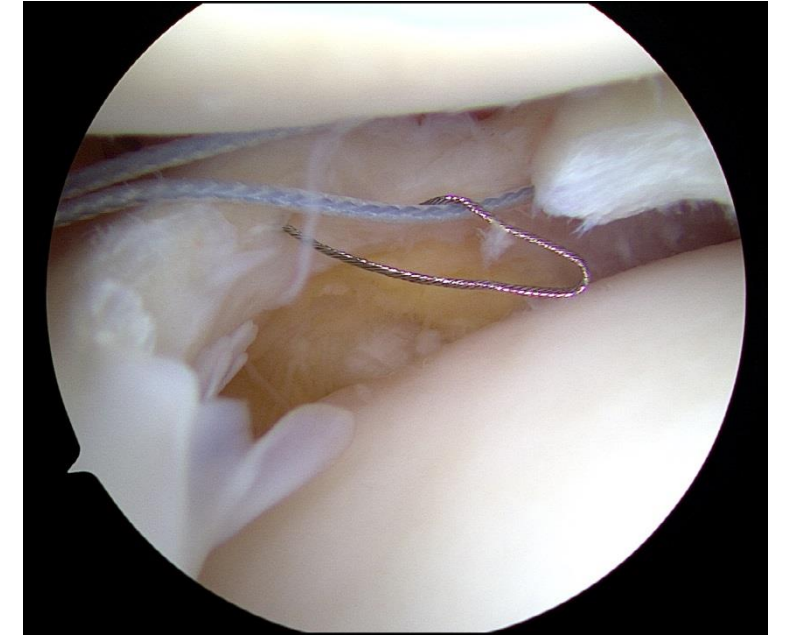
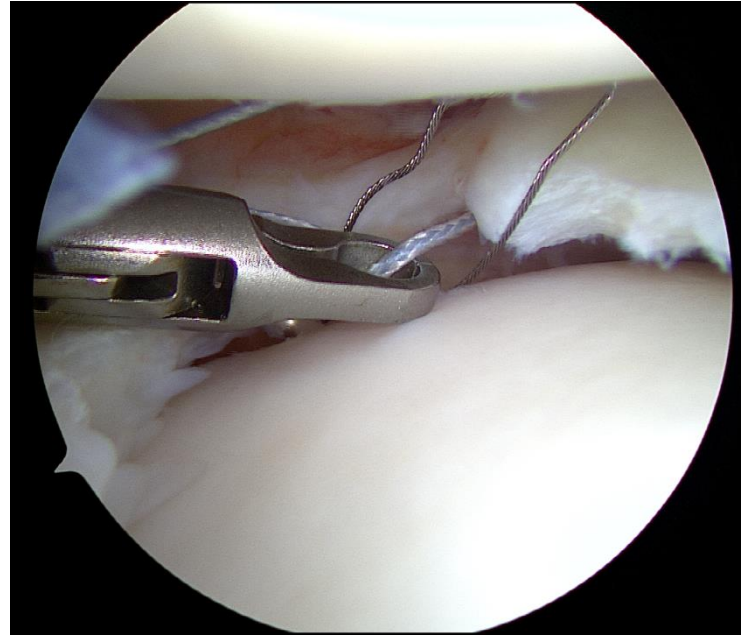


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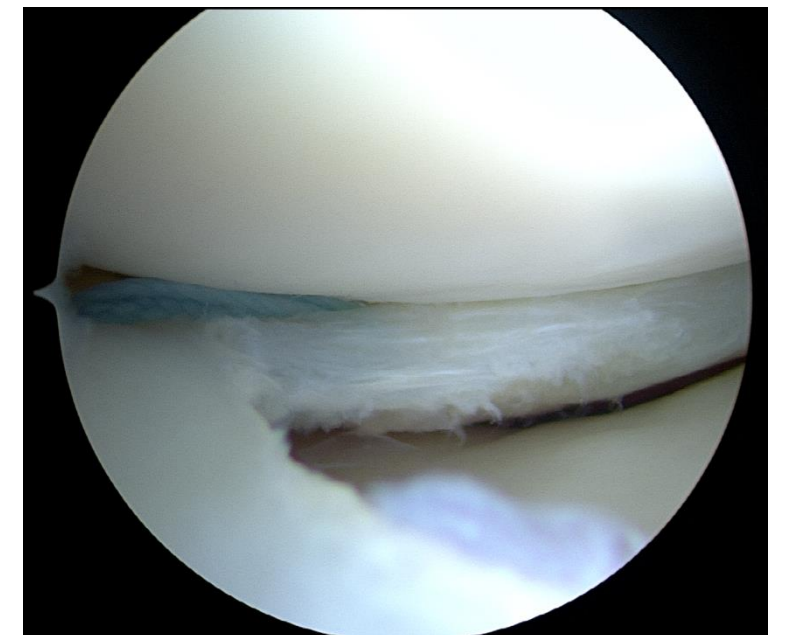
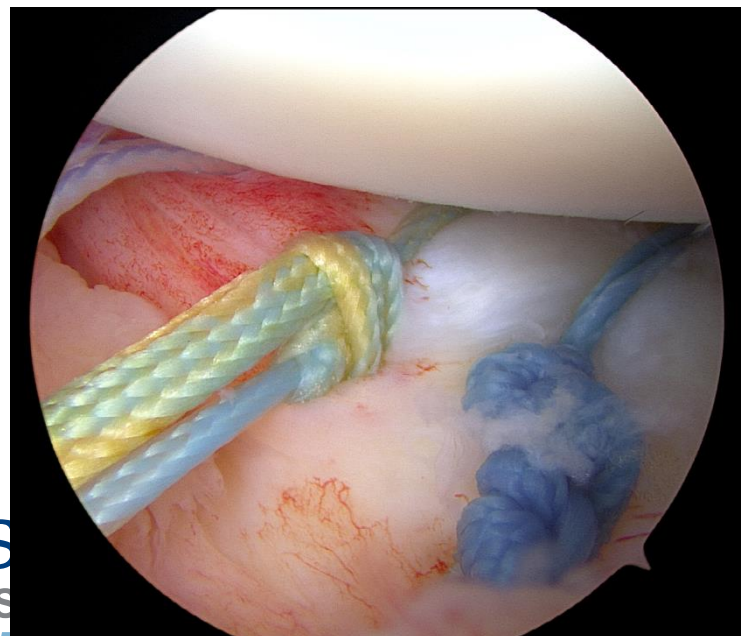


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Procure 2



Tread is relayed by metal loop



Tread is tied intraarticularly

LM after all inside suture



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Rehabilitation after op.

- Knee brace fixation in full extension 4 w
0 - 90° active movement 2 w
0 - 110° active movement 2 w
- Non weight bearing 4 w
- Full weight bearing 8 w ~



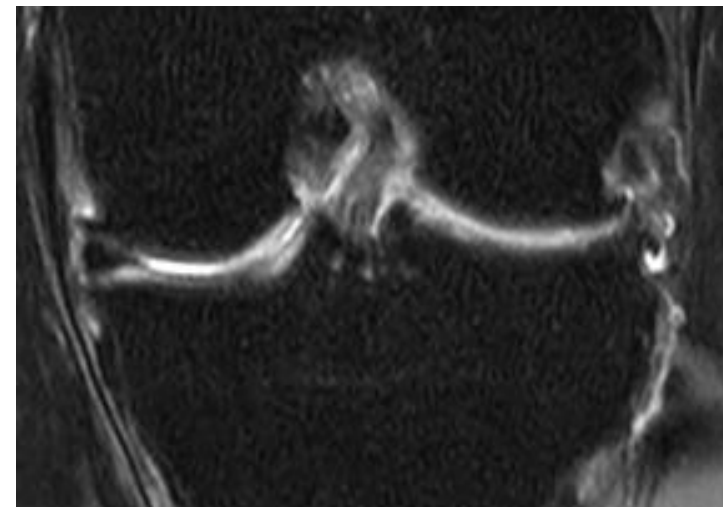
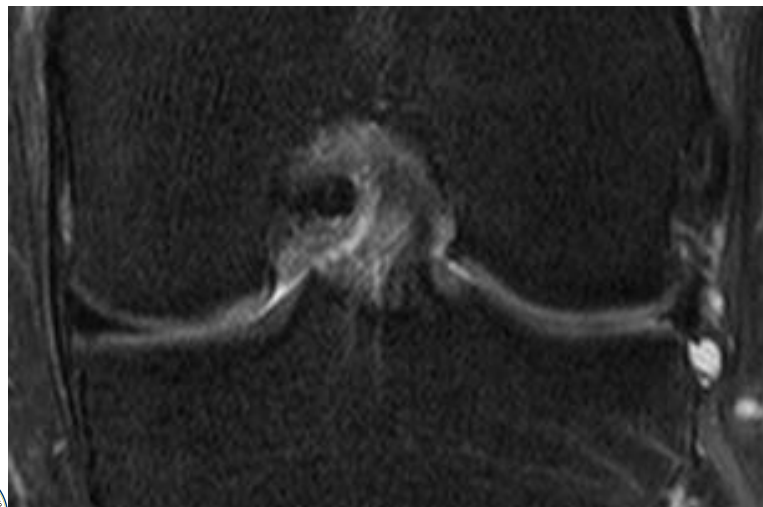
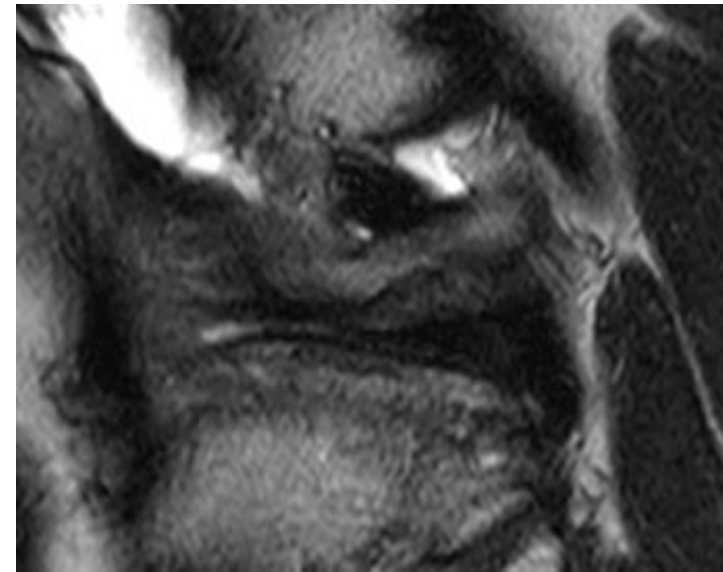
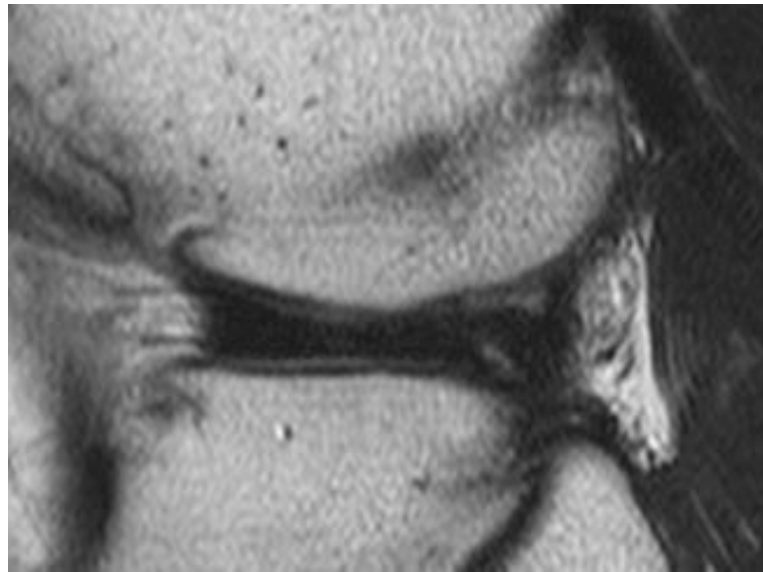
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Results (MRI)

- Complete heal : 5
- Heal with small size : 5
- Failure :2



- trauma
- age (56 yrs)



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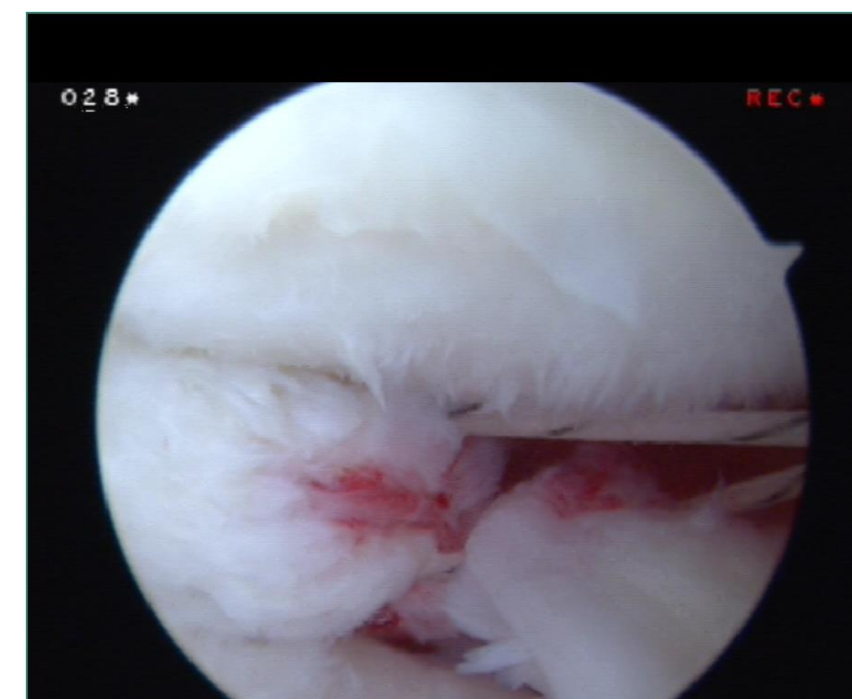
Case presentation 1 : after LM tomy

1

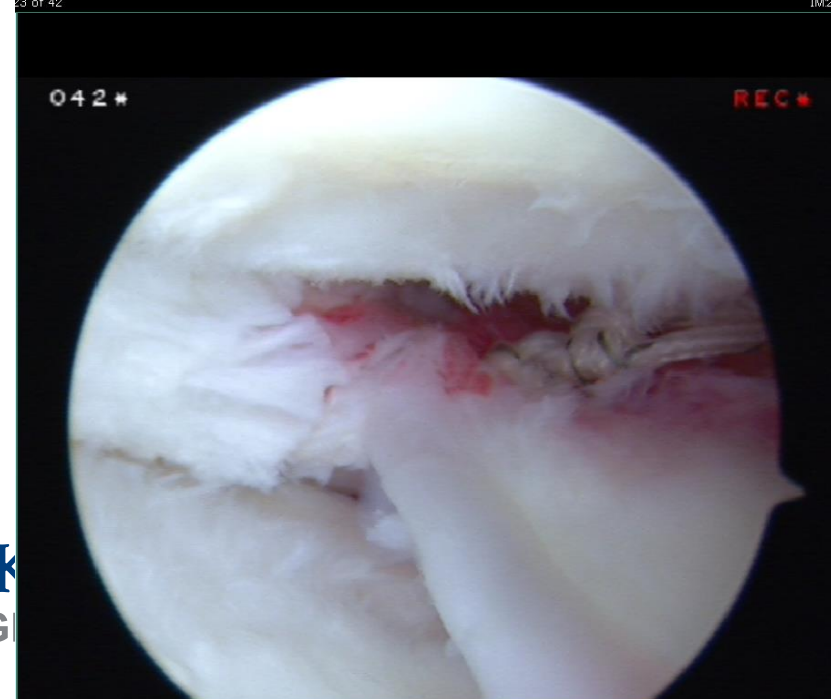
Before suture



2

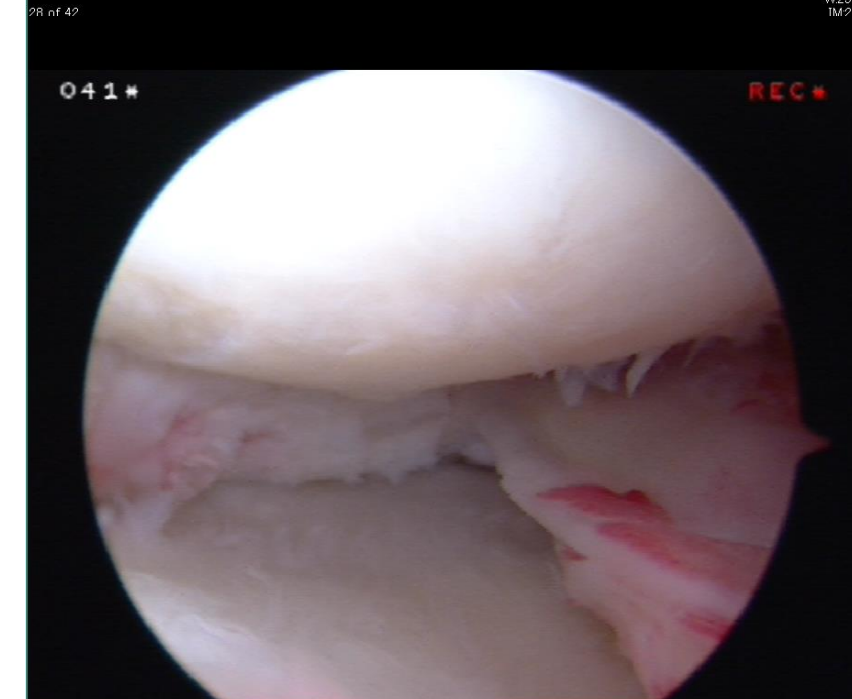


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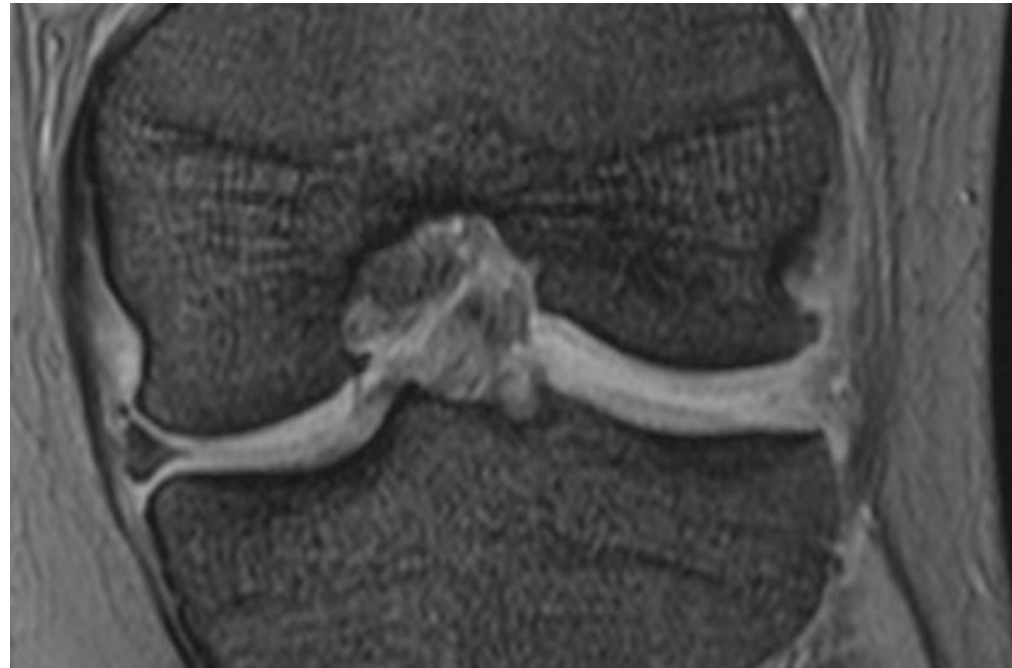
4

After suture



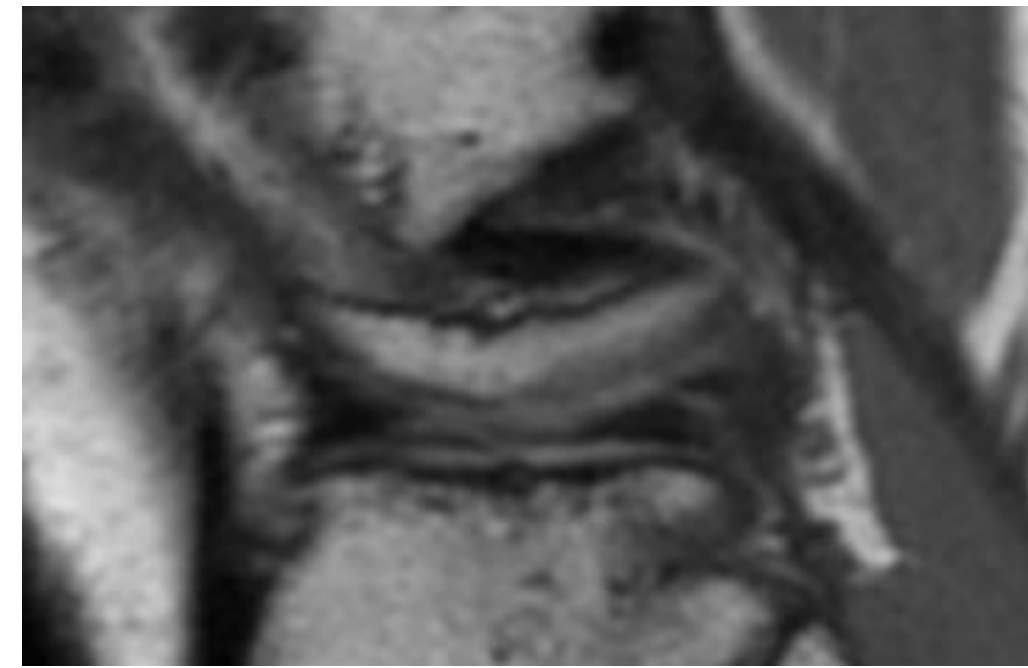
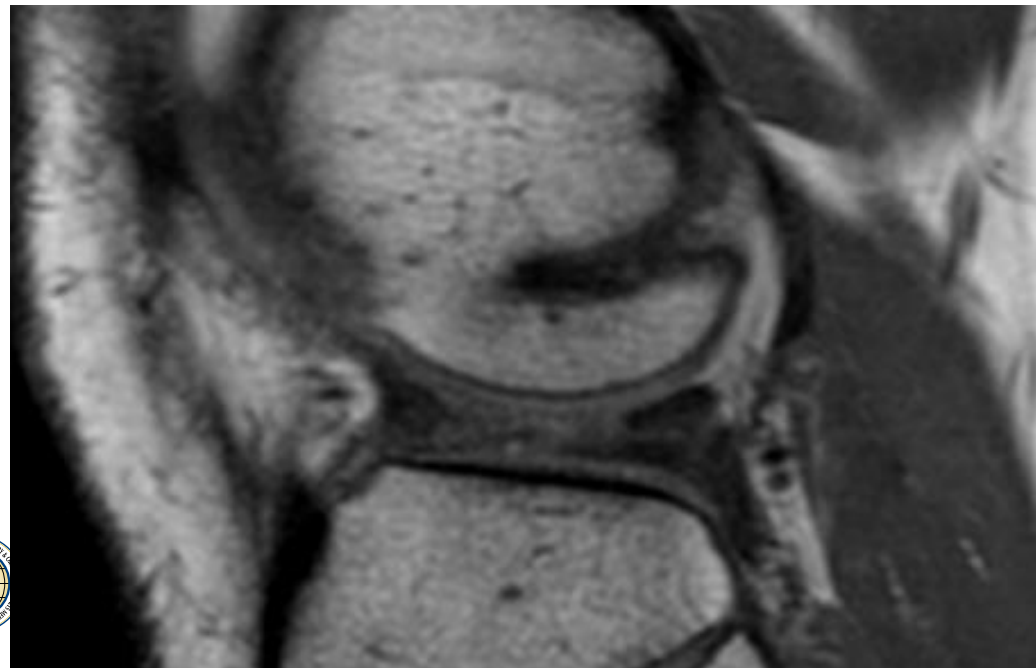
Case presentation 1 (MRI)

Pre op



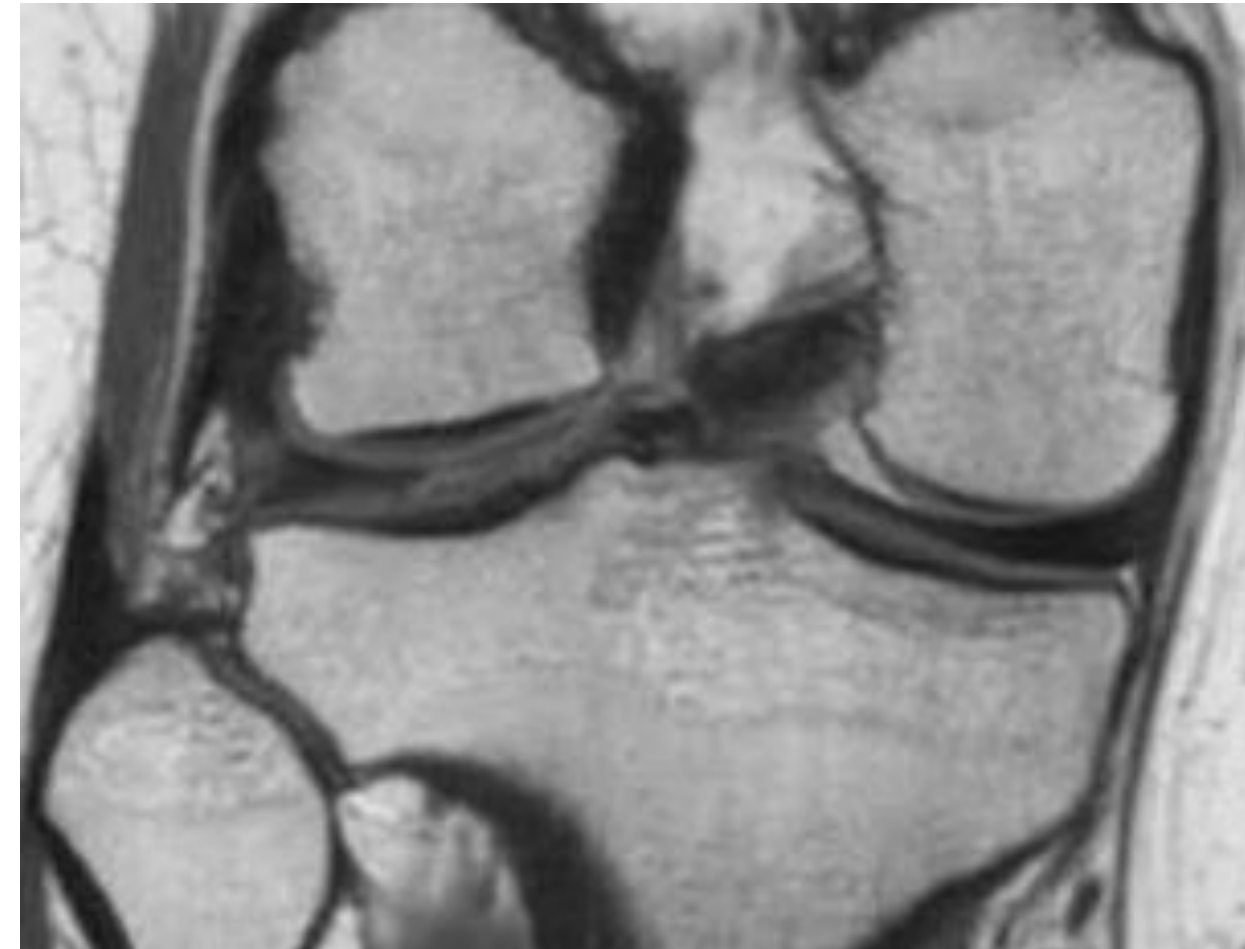
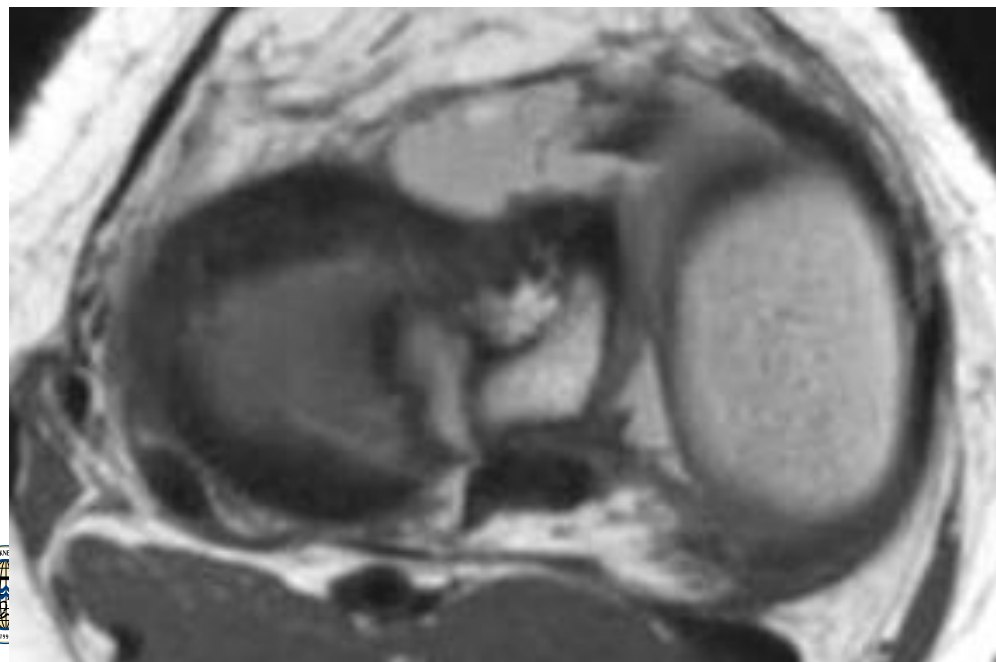
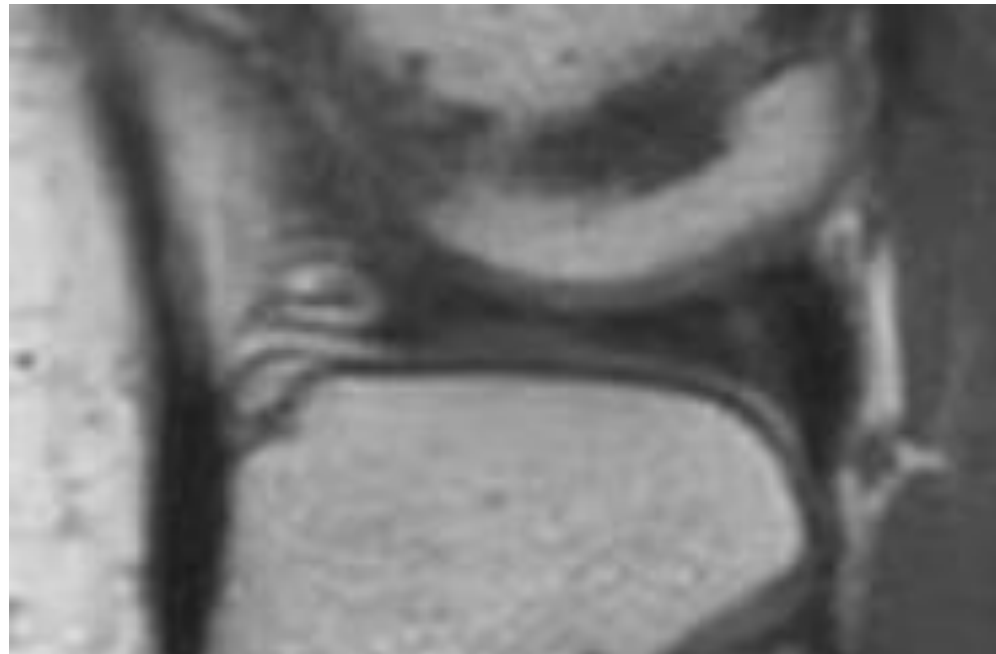
4y

After op



Case presentation 2 : MRI

6M after op

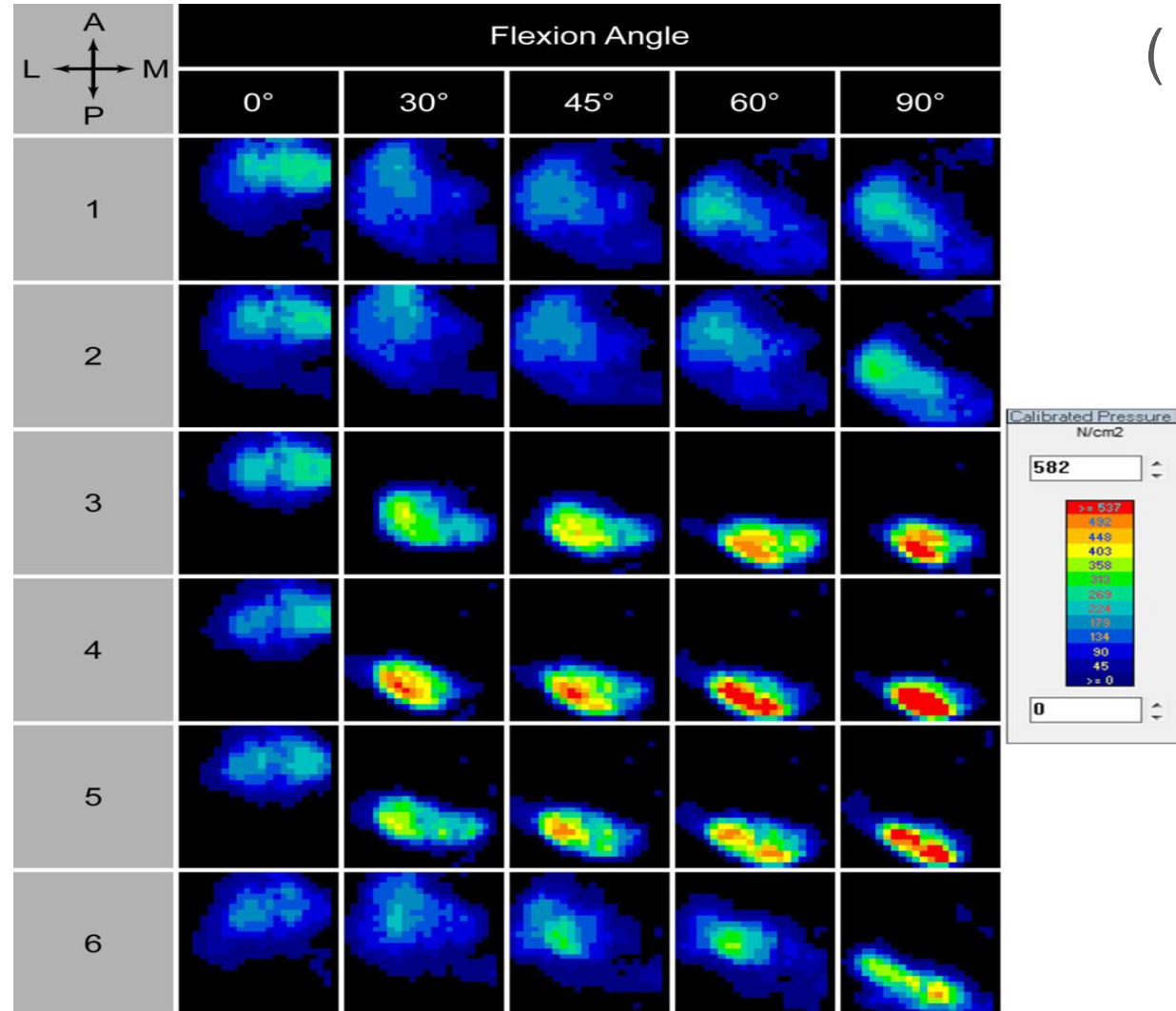


Complete heal



Representative quantitative contact pressure map (1000N)

(Geeslin AG, LaPrade RF, KSSTA 2016) ¹⁾



1. Normal

2. Root

3. Root+ PMFL

4. Root + PMFL + ACL

5. Root + PMFL + ACLR

6. Root repair +PMFL + ACLR

Wide split radial tear seems like situation 3



Anatomical repair should be done for radial tear

Repair techniques for radial tear in lateral meniscus

- New technique (**tie grip**) of arthroscopic meniscus repair in radial tears.
K Nakata et al . Sports injuries. 2012 ²⁾
- Radial meniscal tears are best repaired by a modified ``**cross**`` tie-grip sutures based on a biomechanical comparison of 4 repair techniques in a porcine model
Y Nakanishi et al . Orthop J Sports Med 2020 ³⁾
- All-inside arthroscopic tie-grip suture repair for radial tear in the midbody of lateral meniscus using **all-inside device** and slotted cannula
M Iguchi et al Arthroscopic Technique 2024 ⁴⁾



Our true all inside suture for radial tear in lateral meniscus is different from those techniques. And results are good.



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conclusion

- We performed true all inside suture without any anchor for wide split tear of lateral meniscus
- The results using MRI were good

reference

1. A Geeslin et al: Influence of lateral meniscal posterior root avulsions and the meniscofemoral ligaments on tibiofemoral contact mechanics. KSSTA 2015
2. K Nakata et al :New technique of arthroscopic Meniscus repair in radial tears. Sports injuries 2012 . 305-311.
3. Radial meniscal tears are best repaired by a modified cross tie grip suture based on a biomechanical comparison of 4 repair technique in a porcine model. Y Nakanishi et al . Orthop J Sports Med 2020
4. M Iguchi et al :All-inside arthroscopic tie-grip suture repair for radial tear in the midbody of lateral meniscus using all-inside device and slotted cannula. Arthroscopic Technique 2024



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