Clinical Result with Second-Look Arthroscopic Findings after Arthroscopic Treatment for Posterior Meniscal Root Tears with Anatomical Double Bundle ACL Reconstruction

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I have no financial conflicts to disclose.
Purpose

We describe an arthroscopic evaluation after treatment for posterior meniscal root tear associated with ACL injury
Methods

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Among patients with anatomical double bundle ACL reconstruction with hamstring tendon autograft, there were 148 patients who were able to evaluate by postoperative arthroscopy.

Eleven patients of them were performed suturing or removal of a part of the posterior meniscal root tear.

Age: average age 30.3 years (range 13-56 years)
Gender: 6 men, 5 women
Medial Meniscal Posterior Root Tear (MMPRT)

2knee

All-inside suture FAST-FIX360

LaPrade classification

Case of **MMPRT**

56 years **Man**  
LaPrade classification **Type3**

No progression of cartilage damage

2nd look  
Lax healing  
(Seo Classification, AJSM 2011)
Lateral Meniscal Posterior Root Tear

LaPrade classification


- **Suture**: 1
- **Remove**: 1
- **Remove + Suture**: 1
- **All-inside suture**: FAST-FIX360 + Suture hook

Lax healing: 1

Complete: 2

Lax healing: 3

Remove: 1

Remove + Suture: 1

Remove: 1

Suture: 5
Case of LMPRT

36 years Man

LaPrade classification Type 4

ICRS grade P3 G1 MFC1 MTP1 LFC1 LTP1 ⇒ P3 G2 MFC2 MTP1 LFC1 LTP2

FAST-FIX 360 bridge suture

Complete healing (Seo Classification, AJSM 2011)
removal of a part of the meniscus

ICRS grade  P0 G1 MFC0 MTP0 LFC0 LTP2  ⇒  P0 G1 MFC3 MTP2 LFC3 LTP4

Post operative 18 months

cartilage damage had worsened.

Case of LMPRT②

30 years Man  LaPrade classification  Type3
Allaire, R. et al reported in the medial compartment, a posterior root tear of the medial meniscus caused a 25% increase in peak contact pressure compared with that found in the intact condition and repair restored the peak contact pressure to normal.

In all cases of all-inside suturing for MMPRT (Type 3, 4), meniscal instability had improved and good results were obtained.
LMPRT is greatly related to knee instability, leading to the progression of Osteoarthritis of the knee in cases requiring removal of a part of LMPRT (Type 3, 4), cartilage damage had worsened.
Summary

Short-term results after surgery

all-inside suturing for Root tear (Type 3, 4), meniscal instability had improved and good results were obtained requiring removal of a part of the meniscus, cartilage damage had worsened

I think that it leads to prevention of cartilage damage progression by suture treatment aggressively.


• Marzo, J. M. et al : Effects of medial meniscus posterior horn avulsion and repair on tibiofemoral contact area and peak contact pressure with clinical implications. AJSM 2009


• Forkel, P. et al. Repair of the lateral posterior meniscal root improves stability in an ACL-deficient knee. KSSTA 2018