

## Paper #49

# Divergent Patellar Bony Tunnels versus Patellar Anchor Fixation for Reconstruction in Isolated Medial Patellofemoral Ligament (MPFL) Rupture

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### Summary:

Comparing the clinical outcome of two techniques for medial patellofemoral ligament reconstruction.

### Abstract:

## Introduction

Medial patellofemoral ligament (MPFL) is the primary medial stabilizer of the patella, limiting its lateral translation.

Several studies have shown that (MPFL) is always ruptured or deficient in case of acute dislocation or chronic patellofemoral instability. Several surgical techniques had been described for MPFL reconstruction yet there has not been a clear advantage of one technique over another.

Our hypothesis is that MPFL reconstruction using autologous semitendinosus and two tunnel diverging transverse patellar technique versus the medial birder patellar anchor fixation could provide comparable functional outcome for the treatment of recurrent patellar dislocation.

**Patients and methods:** This is a prospective randomized comparative study that included 33 athlete patients divided into two groups(A)and (B). Group(A) included 17 patients undergone divergent bony tunnel technique while group(B) included 16 had anchor fixation. There were 6 males(35.3%) and 11 females (64.7%) in group(A) while in group(B) 7 males(43.8%) and 9 females(56.2%). The mean age was (21.11+/-3.6) years in group(A) while in group(B) was (21.00 +/-3.93). The mean follow up was (34.47+/-4.58) months in group(A) while in group(B) was (35.81+/-3.81). The inclusion criteria were the occurrence of multiple episodes of patellar dislocation(>2times) and failure of conservative treatment for more than 6 months. The exclusion criteria were generalized ligamentous laxity, genu valgum >7°, trochlear sulcus angle >145°on merchant skyline 30°flexion views, trochlear dysplasia according to dejour classification, Q angle >(17°-20°), TT-TG distance >20 mm, presence of meniscal or ligamentous tears and previous distal realignment procedure. The functional outcome was assessed using Kujala, Fulkerson, modified Tegner-Lysholm and VAS scores. The radiological assessment was done using the true AP,lateral and axial skyline merchant views at 30°flexion, MRI and CT.

## Results

In group(A), the preoperative kujala score was 54.47+/-4.84 and became 83.29+/-1.99 postoperatively. While in group(B) was 53.75+/-5.88 and became 81.12+/-3.55. The Fulkerson score was 54.52+/-7.88 and improved to 89.88 +/-2.44 in group(A) compared to 52.50+/-7.68 preoperatively and 89.87+/-3.18in group(B). The modified Tegner - Lysholm score was 55.82+/-5.49 preoperatively and became 89.94+/-2.19 in group(A) compared to 58.93+/-5.28 which became 89.87+/-3.07. There was a statistical significant difference between the preoperative and the postoperative scores in both groups (P.value <0.001) reflecting the importance of MPFL reconstruction in cases of isolated MPFL rupture in athlete patients with recurrent patellar dislocation. There was no statistical significant difference between both groups in the functional outcome scores postoperatively.

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### Conclusion

Both techniques of MPFL reconstruction in patients with recurrent patellar dislocation rendered comparable results in the functional and radiological outcomes.