

# Autologous Hamstring Medial Patella Femoral Reconstruction (On-Lay) & Arthroscopic Lateral Release. A “Groovy Technique”.

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## **Introduction:**

Medial Patella Femoral Reconstruction (MPFL) is a well-recognized method in treating patella instability. The surgeon should be aware of other factors involved in treating chronic patella subluxation including bony morphology and overall knee alignment.

## **Methods:**

We present a case of a 45-year-old Malay lady with significant anterior knee pain over 3 years. She had a positive J-sign on examination and radiographs (sky-line views) revealed a laterally subluxed patella with significant tilt. Quadriceps rehabilitation had failed and on initial presentation to our unit, she was mobilizing with a crutch. MRI's showed a tibial tubercle – trochlear groove distance of less than 16mm. The patient agreed to undergo an MPFL reconstruction.

## **Results:**

On arthroscopy, the patella was subluxed at rest with significant lateral capsular tightness. An arthroscopic lateral release was performed using radio-frequency ablation to allow sufficient medial mobilization of the patella. Interestingly, the chondral surfaces of the patella and trochlear were preserved. Ipsilateral autologous semitendinosus and gracilis tendons were harvested and prepared. A medial incision over the patella was made and a small groove was fashioned on the supero-medial patella surface. The graft was then secured to the groove using 3 x all suture anchors (Juggerknot™, Biomet) and the ends were secured to the medial femur using an interference screw under radiological guidance (MPFL isometric point). We felt the groove would increase contact area available for graft integration and therefore decrease the failure incidence. Post fixation arthroscopy showed acceptable patella tracking and radiographs post-op revealed a well seated patella. At 6

months' post-operative, the patient has completed her quadriceps rehabilitation, mobilizing independently and has returned to work.

## **Discussions:**

MPFL reconstruction via this on-lay technique has potential benefits over traditional reconstruction methods which involve bony tunnels into the patella which increases the risk of patella fractures. In cases with significant patella tilting, the combination of an extensive arthroscopic lateral release improves the mobilization of the patella prior to stabilization to improve tracking and outcomes.

## **Conclusion:**

MPFL reconstruction using a “groovy” on-lay technique combined with an arthroscopic lateral release can benefit patients with chronic, significant patella subluxation with associated patella tilt.



Figure 1: Pre- (significant patella tilt) and post-operative radiographs of this patient following MPFL reconstruction and lateral release. Note the medial groove to facilitate the autograft on-lay.

## **References:**

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2. Conlan T., Garth W.P., Jr., Lemons J.E. Evaluation of the medial soft-tissue restraints of the extensor mechanism of the knee. *J Bone Joint Surg Am.* 1993;75:682–693. [[PubMed](#)]