

## Case Introduction

The patient is a 16-year-old male high school football player who sustained a hyperextension injury to his left knee while practicing. MRI demonstrated avulsion of his LCL complex from his fibular head and significant medial tibial and femoral bone bruising (Diagnostic for this injury). Physical exam was significant for laxity with varus stress at 0° & 30° of knee flexion. Positive hyperextension test. Below is the technique utilized for primary LCL complex repair and **Infinity-Lock** 5 mm tape augmentation.



Figure 1 - MRI demonstrating avulsion of LCL complex from the fibular head.

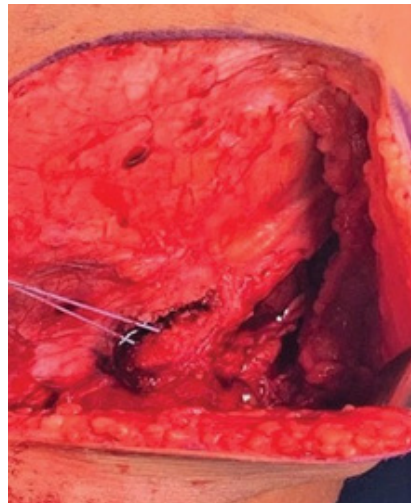


Figure 2 - Heavy suture capturing the entire avulsed LCL complex avulsed from the fibular head.

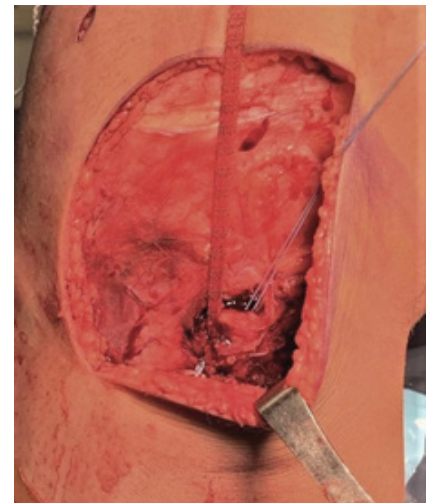


Figure 3 - Suture limbs capturing entire LCL complex and **Infinity-Lock** 5 mm tape.

## Surgical Technique

The **Infinity-Lock** 5 mm tape was trimmed to 8-10 cm (native LCL is approximately 6 cm) and whipstitched at each end with a heavy non-absorbable suture. Diagnostic arthroscopy was performed and there were no significant abnormalities of the cruciate ligaments, menisci or cartilage. Curvilinear incision for our repair started centered over the lateral epicondyle of the knee proximally and distally centered between Gerdy's tubercle and the fibular head. Care was taken to not veer posteriorly. Peroneal nerve was identified and protected posterior to the biceps femoris tendon throughout case.

Heavy non-absorbable suture was used to capture the entire avulsed LCL complex with suture limbs exiting distally. Electrocautery was used to mark the fibular head for proposed anchor placement. A 4.5 mm suture anchor was placed in the LCL anatomic site on the fibular head with our prior suture limbs from our entire LCL complex secured in the anchor. Prior to tensioning and tying the sutures, the leg was placed in 30° of flexion, neutral rotation, and application of a valgus force.

Next, a second knotless suture anchor was placed 1 cm distal to our previously placed anchor and the limb from our **Infinity-Lock** suture was secured and tied at this point. Proximally, an incision was made in the IT band to identify the proximal LCL insertion posterior and proximal to the lateral epicondyle. The femoral tunnel was reamed (5 mm diameter) to the medial cortex and subsequently tapped to accommodate our biocomposite interference screw.

Passing pin was placed through our tunnel and the opposite limb of the **Infinity-Lock** was passed through our tunnel. Prior to final tensioning and placement of our interference screw the leg was again placed in 30° of flexion, neutral rotation, and application of a valgus force.

Layers proximally over the lateral epicondyle and distally over the fibular head were closed. Suture of the **Infinity-Lock** to the native LCL with Vicryl suture along the entire construct may be done for reinforcement.

## Surgical Technique continued

Patient was locked at 30° in a TROM brace and made toe-touch weight bearing for 6 weeks.

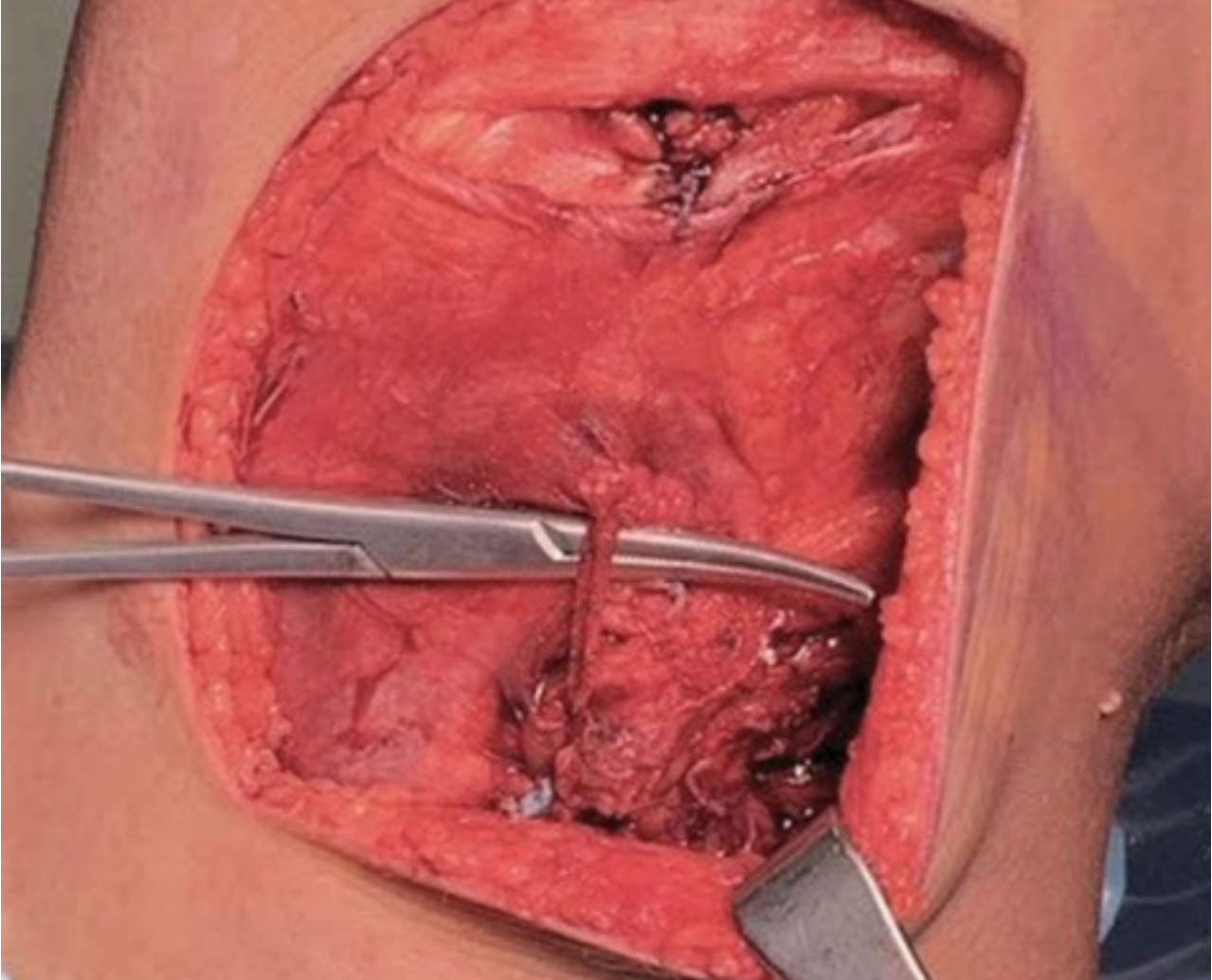


Figure 4 - Final construction showing Infinity-Lock tape overlying native LCL.

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