Technique Guide

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ACL Reconstructions using Patellar Tendon (BTB Graft)

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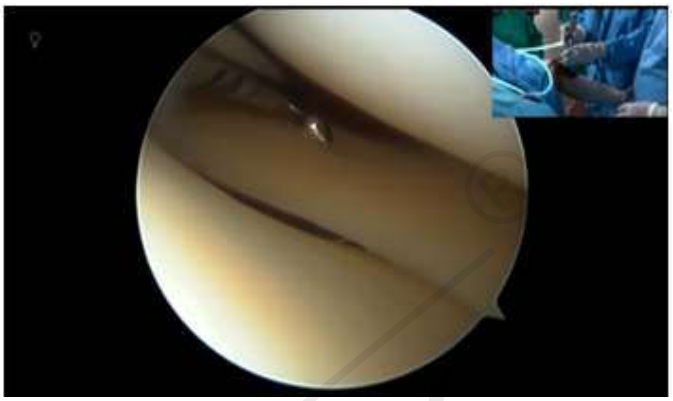
Diagnostic Arthroscopy

Diagnosis of Knee joint is carried out through anterolateral and anteromedial portal. A arthroscopic probe is used to assess the ACL, PCL, Meniscus, Femoral condyle, Tibial plateau.



Graft Harvest

Mark the incision to be centered over the patella tendon or on the medial border of the patella tendon approximately 5-7 cm extending from the distal pole of the patella to the proximal portion of the tibial tubercle

The knee is flexed to 90 degrees to put the tendon under tension.

The central third of the patella tendon (typically 10 mm) is incised with either a double or single bladed scalpel

Bone blocks are harvested approximately 20-25 mm in length and the same width as the chosen tendon width (typically 10 mm)

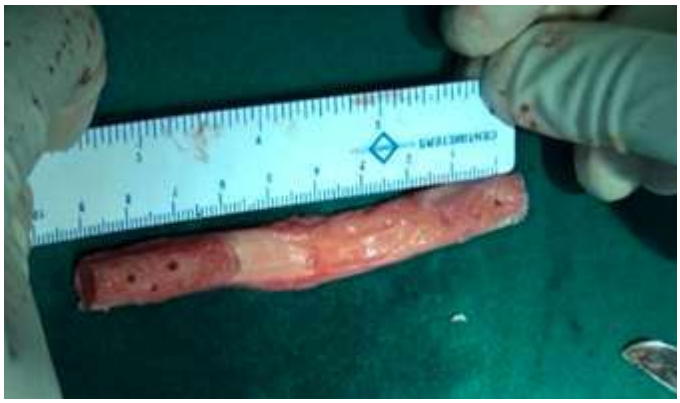
With the knee now in extension, the bone blocks are harvested with a micro oscillating saw and a small 5 mm curved osteotome

Once the cuts are completed on the respected bone, the curved osteotome is used to carefully release the bone from the harvest site

Graft Preparation

Shape the bone plugs to fit into a 10 mm tunnel

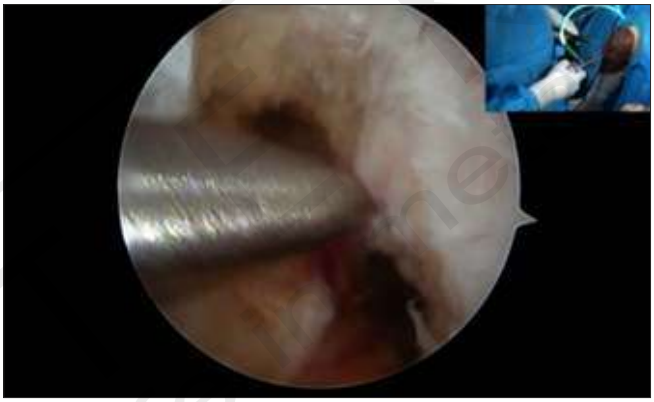
Measure the total length, bony lengths and widths, and tendon length



Make drill holes in the bone blocks to accept sutures for passing and tensioning the graft.

Site preparation

The ACL remnant is removed from the notch usually with a shaver and/or a radiofrequency ablation device while noting the anatomic footprint on the femoral and tibial side for later reconstruction



Leave a small portion of the footprint intact to permit proper identification of the ACL origin and insertion

Care is taken not to injure the PCL

A notchplasty can be performed using notchplasty curette if needed using a large shaver or a burr

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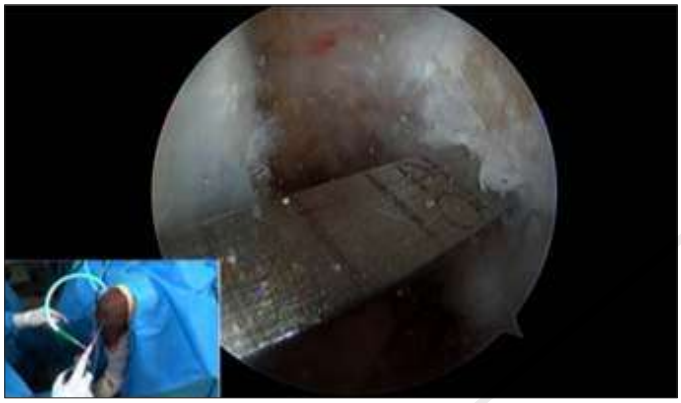
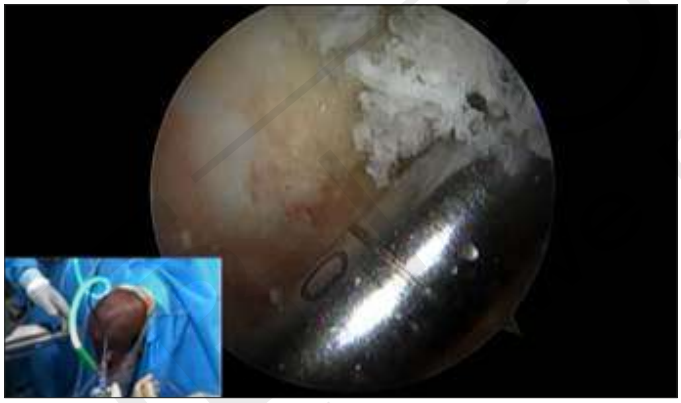
Femoral Tunnel placement

The knee is high flexed to at least 120 degrees and a LOCUS Transportal Femoral Aimer is placed through the medial portal into the medial aspect of the lateral femoral condyle at the previously determined position. A 2.4mm beath pin inserted through the aimer and is driven out the lateral aspect of the leg through the skin.



The total tunnel length is measured using Depth gauge.



Pass the appropriate size FLOWERTIP® Femoral Reamer over the beath pin or graft passing pin and ream to the desired depth making sure to keep the femoral cortex intact.

Then pass a looped free suture through the femoral tunnel that will be used to shuttle the graft into the femoral socket later in the procedure

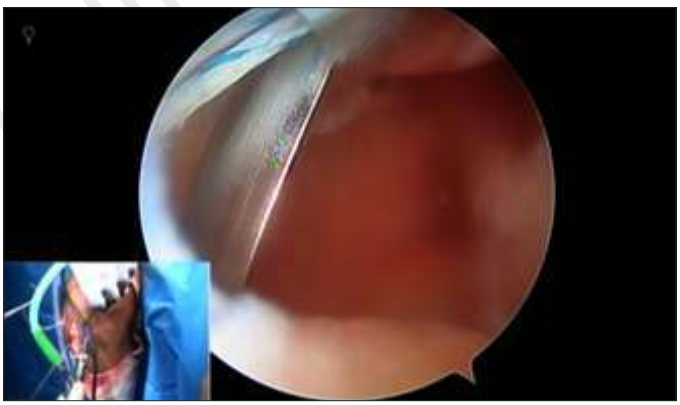
Tibial Tunnel placement

Use a 2.4mm drill bit passing pin and ONLoc® tibial drill guide system to create an anatomic tibial tunnel. Remnants of the tibial attachment of the ACL can be used as a reference as well as the anterior horn of the lateral meniscus.

Remove drill guide with angled bullet and let drill bit passing pin remain on its place.

Once the Drill Bit Passing Pin has been placed, over-ream with the appropriate sized CANNUDRILL® Tibial Reamer.

Place a suture retriever/hook into the tibial tunnel and retrieve the loop of suture that was previously left exiting the femoral socket into the joint. You will now have one continuous passing suture from the tibial tunnel into the joint and out the femoral tunnel



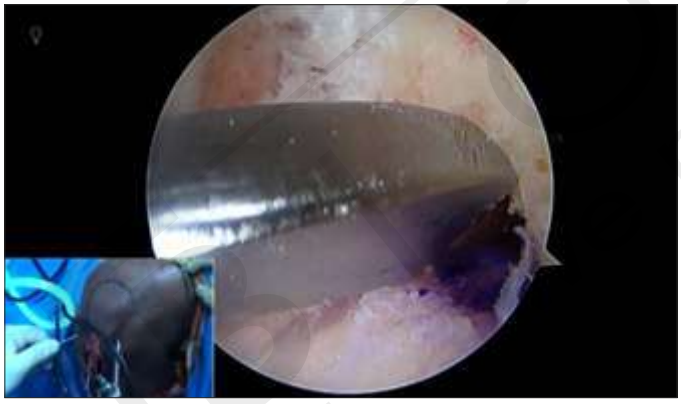
Graft Insertion

The femoral sided graft sutures are placed through the looped end of the passing suture which has been brought out through the tibial tunnel

Tension is applied as the sutures are brought through the joint and out the lateral skin.

The femoral sided graft is pulled into the femoral tunnel. care is taken not to pull the sutures through the bone block. A probe or clamp can aid in obtaining the desired orientation of the graft.

Final fixation is performed as desired



Femoral Fixation

Flex the knee over 120 degrees. the bone tunnel can be notched using Tunnel Notcher to allow screw insertion

Introduce a guide wire for SOFTFIX® / SOFTFIX-PK® / BIOTWIN™ through the anteromedial portal while visualizing through the anterolateral portal

Advance the SOFTFIX®/ SOFTFIX-PK®/ BIOTWIN™ interference screw over the guide wire while positioning of the graft is maintained to keep from advancing the graft into the tunnel. Avoid damaging the tendon with the threads of the screw

Tibial Fixation

The tibial tunnel can be notched if needed

Introduce a guide wire for interference screw into the tunnel

Apply appropriate tension on the graft through the tibial tunnel while placing the SOFTFIX®/ SOFTFIX-PK®/ BIOTWIN™ interference screw

Ordering information

Catalog No.	Product Description
BAK-7164.15	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 5 .0mm, Len. 15mm
BAK-7164.20	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 5 .0mm, Len. 20mm
BAK-7165.23	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 6 .0mm, Len. 23mm
BAK-7166.23	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 7 .0mm, Len. 23mm
BAK-7166.28	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 7 .0mm, Len. 28mm
BAK-7167.23	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 8 .0mm, Len. 23mm
BAK-7167.28	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 8 .0mm, Len. 28mm
BAK-7168.23	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 9 .0mm, Len. 23mm
BAK-7168.28	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 9 .0mm, Len. 28mm
BAK-7168.35	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 9 .0mm, Len. 35mm
BAK-7169.28	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 10 .0mm, Len. 28mm
BAK-7169.35	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 10 .0mm, Len.35 mm
BAK-7170.35	SOFTFIX-PK® Interference screw, cannulated, roundhead; Dia. 11 .0mm, Len. 35mm
BAK-7128.20S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 7 .0mm, Len. 20mm
BAK-7128.25S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 7 .0mm, Len. 25mm
BAK-7128.30S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 7 .0mm, Len. 30mm
BAK-7101.20S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 8 .0mm, Len. 20mm
BAK-7101.25S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 8 .0mm, Len. 25mm
BAK-7101.30S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 8 .0mm, Len. 30mm
BAK-7102.25S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 9 .0mm, Len. 25mm
BAK-7102.30S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 9 .0mm, Len. 30mm
BAK-7114.25S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 10 .0mm, Len. 25mm
BAK-7114.30S	SOFTFIX® Interference screw, cannulated, roundhead, Dia. 10 .0mm, Len. 30mm
BT11CPVI0720	BIOTWIN™ Composite Interference screw 7x20mm
BT08CPVI0725	BIOTWIN™ Composite Interference screw 7x25mm
BT08CPVI0730	BIOTWIN™ Composite Interference screw 7x30mm
BT11CPVI0820	BIOTWIN™ Composite Interference screw 8x20mm
BT08CPVI0825	BIOTWIN™ Composite Interference screw 8x25mm
BT08CPVI0830	BIOTWIN™ Composite Interference screw 8x30mm
BT11CPVI0920	BIOTWIN™ Composite Interference screw 9x20mm
BT08CPVI0925	BIOTWIN™ Composite Interference screw 9x25mm
BT08CPVI0930	BIOTWIN™ Composite Interference screw 9x30mm
BT12CPVI1025	BIOTWIN™ Composite Interference screw 10x25mm
BT08CPVI1030	BIOTWIN™ Composite Interference screw 10x30mm
BT15CPVI1135	BIOTWIN™ Composite Interference screw 11x35mm
BT15CPVI1235	BIOTWIN™ Composite Interference screw 12x35mm

*SOFTFIX® - Titanium Interference Screws
SOFTFIX-PK® - PEEK Interference Screws
BIOTWIN™- Biocomposite Interference Screws

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