

How to Overcome Severed Sutures of the Tibial Bone Peg in Anterior Cruciate Ligament Reconstruction

Daniel K. H. Yip, F.R.C.S.(Edin), F.R.C.S.E.(Orth), F.H.K.A.M.,
Jimmy W. K. Wong, F.R.C.S.(Edin), F.H.K.A.M., and
Eric P. Chien, F.R.C.S.(Glas), F.R.C.S.(Edin), F.H.K.A.M.

Abstract: We report a case of severed sutures of the tibial bone peg during anterior cruciate ligament reconstruction. The graft retracted proximally in the bone tunnel. We describe a simple and aesthetically acceptable method to salvage this rare complication by use of a small arthrotomy through the defect in the remaining patellar tendon. **Key Words:** Sutures of tibial bone peg—Anterior cruciate ligament—Reconstruction complication.

A 21-year-old male recreational basketball player had persistent instability symptoms of his left knee for 1 year following a knee injury. Arthroscopy confirmed a midsubstance rupture of the anterior cruciate ligament. He had positive Lachman and pivot-shift clinical signs. Anterior cruciate ligament reconstruction was performed using the endoscopic single-incision technique. Two holes on each bone peg were drilled for passing of the sutures. No. 1 PDS sutures for the femoral side and No. 1 Vicryl sutures for the tibial side were used for graft passage. The graft was passed easily and the femoral bone peg was secured with a 9-mm interference screw. An interference screw guidewire was inserted parallel to the bone peg in the tibial tunnel. While the interference screw was inserted, the Vicryl sutures snapped and the tibial bone peg retracted proximally under tension. The

bone peg then became jammed within the tunnel. Arthroscopic visualization and probing found the graft to be lax.

A small midline arthrotomy was made through the defect of the middle third of the patellar tendon where the tendon graft had been harvested. The tibial bone peg was gently pushed antegrade into the knee joint. It was then retrieved with a pair of artery forceps through the small arthrotomy (Fig 1). New traction sutures were then passed through the drilled holes of the tibial bone peg and retrieved through the tibial tunnel. The tibial bone peg was then retrogradely pulled into the tibial tunnel by pulling on the new sutures.

The patient was rehabilitated using our standard program of immediate range of motion and weight bearing as tolerated. He has been followed-up for 48 months and he has been able to resume basketball at the same level. He had negative Lachman and pivot-shift test results on follow-up clinical examination.

DISCUSSION

Anterior cruciate ligament reconstruction using patellar tendon graft is a common procedure. The possibility of this complication arising was hypothesized by Matthews and Soffer¹ as early as 1989. Different

From the Department of Orthopaedic Surgery, University of Hong Kong, Queen Mary Hospital, Hong Kong.

Address correspondence and reprint requests to Daniel K. H. Yip, F.R.C.S.(Edin), F.R.C.S.E.(Orth), F.H.K.A.M., the Department of Orthopaedic Surgery, University of Hong Kong, Queen Mary Hospital, Pokfulam Road, Hong Kong. E-mail: dkhyip@hku.hk

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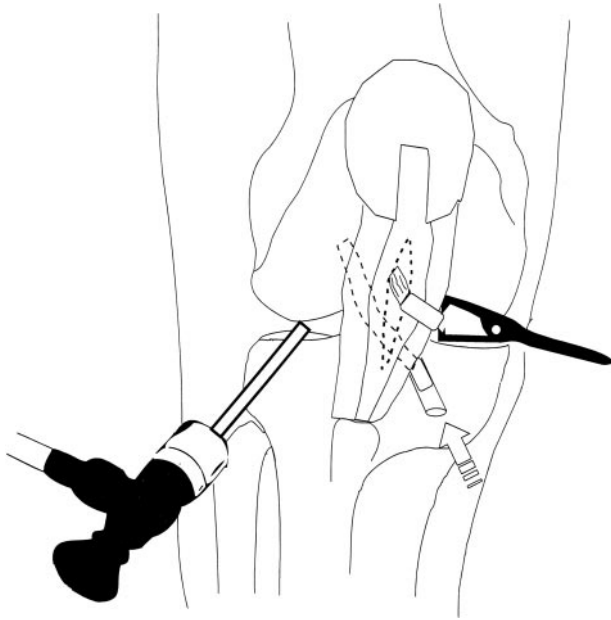


FIGURE 1. Retrieval of intra-articular bone peg via an arthrotomy.

techniques for avoiding cutting sutures have been described previously.¹⁻³ Most of the literature emphasizes prophylactic measures only. There are very few

published reports⁴ on how specifically to resolve this complication should it arise. Valentin and Engstrom⁵ described a method using a threaded pin. This may not provide sufficient grip on the bone peg to maintain tension on the graft during screw insertion and is dependent on the quality and geometry of the tibial bone peg. We describe herein another method that may be useful to others. The advantage of our method is that much of the work is done outside the knee joint and is thus quicker to perform. One can also confidently reapply as much tension as desired during screw insertion.

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