Using the Posteromedial Approach to Fix Posterior Cruciate Ligament Tibial Avulsion: A Technical Note and Case Series

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Purpose: Tibial avulsion fractures involving the posterior cruciate ligament (PCL) are common; however, the choice between open reduction and internal fixation (ORIF) and arthroscopic repair of acute fractures remains controversial. We assessed the efficacy and safety of managing PCL avulsion fractures with ORIF using the posteromedial approach.

Methods: This series includes 8 patients (7 males and 1 female) with a median age of 36 years (range, 24-48) who underwent ORIF with a posteromedial approach for PCL avulsion fractures, with and without other knee ligamentous injuries. Postoperatively, the mean follow-up time was 22 months (range, 9-48). All the surgeries were performed within 18 days (range, 1-63) of injury, and clinical and radiological assessments were also used.

Results: All patients achieved fracture union at an average of 14 weeks postoperatively (range, 8-24). Two patients who sustained other ligamentous injuries demonstrated residual instability. Patients returned to work (heavy labor) within 6 months postoperatively (range, 4-9).

Conclusion: The posteromedial approach is safe, time-saving, and was not associated with complications. This approach provides stable fixation with no residual knee laxity and can be used to manage posteromedial fractures of the medial femoral condyle and tibial plateau. Further high-quality studies are needed to assess this surgical approach.