

SINGLE INCISION DUAL APPROACHES IN TIBIA PLATEAU FRACTURE

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Introduction: Tibia plateau fracture is not an uncommon fracture. No isolated conventional anterolateral or posterolateral approach can provide adequate exposure to a complex tibia plateau fracture.

Discussion: Case A 17 years old was involved in motor vehicle accident with the complaint of right knee pain and swelling. Physical examination noted right knee swelling with bruises on the anterolateral knee. Right knee radiograph showed fracture of right tibia plateau involving anterolateral extending to posterolateral corner of tibia. A 15cm long lateral incision was started 5cm proximal to the lateral knee joint line and directed distally just anterior to fibular head. Fascia was incised along skin incision. Common peroneal nerve was identified medial to biceps femoris muscle and it was isolated. In anterolateral approach, Iliotibial band(ITB) was incised longitudinally parallel to the fibre until the Gerdy's tubercle. Insertion of the ITB at Gerdy's tubercle and anterior tibialis muscle were partially released from the proximal tibia. In posterolateral approach, a blunt dissection of the popliteal fossa was made at the interval between the lateral head of gastrocnemius and biceps femoris. Soleus origin is partially elevated to expose the posterolateral fragment without fibula osteotomy. The fracture was reduced and fixed with anterolateral buttress plate and posterolateral compression screws. Discussion Three column classification [medial, lateral and posterior columns] has been proposed to provide a better approach and fixation technique. Fractures Involvement of more than one column has been suggested for combine approach(1). Posterolateral trans-fibular neck approach was previously described to allow adequate exposure of posterolateral tibia. Modification of posterolateral approach without fibular osteotomy has reduced the extensive injury to posterolateral structure and the complexity of surgery without post-operative complication.

Conclusion: Single skin incision for combine anterolateral and posterolateral approach to complex tibia plateau fractures without trans-fibular osteotomy can reduce surgical site morbidity.