

Novel Approach to Reduce and Stabilize Lateral Joint Impaction in a Schatzker IV Fracture Dislocation

Cesar Cereijo, DO; Max Davis, MD; Taylor M. Yong, MD; William T. Obremesky, MD
Vanderbilt, Nashville, Tennessee, UNITED STATES

Purpose: Our objective is to demonstrate a novel technique using an anteromedial approach to reduce lateral joint impaction through fracture via an anteromedial incision.

Methods: Schatzker IV fractures occur from a varus force with medial-sided injury only or a shear force where the lateral joint may be impacted 1 to 2 cm and thus challenging to reduce the lateral joint and provide medial column fixation. 10 cases are reported with lateral joint impaction and placement of a medial only, or an additional anteromedial plate or posteromedial plate, depending on fracture pattern. All meniscal or cruciate ligament tears were also repaired.

Results: Median follow-up was 34.1 weeks. All fractures healed with no infections. Range of motion was a mean of $118^{\circ} \pm 11^{\circ}$. Radiographic measurements at final follow-up are: articular maximal step-off 0.5 ± 0.9 ; medial proximal tibial angle (degrees) 87.2 ± 2.2 ; posterior proximal tibial angle (degrees) 83.9 ± 2.4 ; and condylar width compared to contralateral 1.8 ± 1.7 mm.

Conclusion: All fractures healed with re-establishment of articular surface, ligament stability, meniscal tears, and bony stability. Radiographic assessment demonstrates attaining and maintaining coronal and sagittal alignment with no deep infections. This anteromedial approach to this Schatzker IV injury is a novel approach for this uncommon but challenging fracture pattern.



The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device they wish to use in clinical practice.