Meniscus Tears Requiring Repair Are a Marker of Poor Outcome Following Tibial Plateau Fractures

*Kenneth A. Egol, MD; **Amaya M. Contractor, BS**; Sanjit R. Konda, MD; Abhishek Ganta, MD; Steven Rivero, MD; Philipp Leucht, MD*

Purpose: The purpose of this study was to assess the effect of an acute meniscus tear that required repair in association with a tibial plateau fracture repair on outcomes.

Methods: Over a 17-year period, 850 patients presented and underwent repair of an acute tibial plateau fracture. 161 tibial plateau fractures had a meniscus tear that underwent acute repair at the time of bony fixation (meniscal repair [MR] cohort). These patients were matched according to age and Schatzker classification to operatively repaired tibial plateau fracture patients with no meniscus repair (NMR). Demographics were collected and outcomes including radiographic healing, knee range of motion (ROM), and complication rates were recorded.

In addition, reoperation rates were compared and any reoperation for meniscus repair failure identified. All patients had a minimum 1-year follow-up.

Results: A total of 322 patients with a mean of 21.4 months follow-up met inclusion criteria. Patients in the MR cohort had worse total knee ROM at 12 months in both extension and flexion ($P = 0.046$, $P<0.001$). Additionally, MR patients had higher pain scores ($P = 0.005$) and poorer Short Musculoskeletal Function Assessment (SMFA) scores ($P = 0.010$). Finally, MR patients had 3 times the rate of reoperation ($P = 0.002$) overall, but not for the meniscus.

Conclusion: Operatively repaired tibial plateau fracture patients who require a meniscus repair were found to have worse ROM, more pain, and lower function at minimum 12 months post-operation. Additionally, they developed more complications and were more likely to undergo reoperation than those patients who did not undergo a meniscus repair.