

Outcomes of Femoral Intertrochanteric Fractures in Elderly Patients: Has Anything Changed Over the Last Decade?

Amit Davidson, MD; Yulia Orsky, BS; Guy Feldman, MD; Rami Mosheiff, MD; Yoram A. Weil, MD

Hadassah Medical Center, Jerusalem, Israel

Purpose: Over the past decade, significant policy changes in treatment of geriatric intertrochanteric fractures (ITFs) occurred worldwide. These have not skipped our center as well and included a tendency for the widespread use of cephalomedullary nails (CMNs) instead of sliding hip screws (SHSs) and faster time to surgery from admission, as mandated by national health policy changes. The aim of this study was to describe the outcome of patients treated surgically for ITFs regarding mortality, reoperation, and surgical complications over two separate decades at the same academic Level I trauma center.

Methods: A total of 485 geriatric patients with ITFs were selected from two different time periods. Two patient cohorts comprising 214 and 271 cases were treated in 2006-2007 and 2017-2018, respectively. Fracture AO/OTA classification was made by a fellowship-trained orthopaedic trauma surgeon and an orthopaedic trauma fellow. Patients' demographics, major comorbidities (divided into 6 major groups), surgery type, and time from admission to operation were retrospectively analyzed and correlated with clinical outcomes in terms of 30-day and 1-year mortality, length of stay, revision surgery, and complications.

Results: The comparison between the two study groups did not demonstrate significant differences in fracture subtypes (AO/OTA). Time from admission to surgery was significantly reduced in the 2017-2018 group with 87.8% (n = 237) of surgeries performed within 48 hours (mean time decreased from 37.55 hours to 31.56 hours [$P = 0.04$]). CMNs were used in only 5 patients in 2006-2007 (2.3%, n = 5), while extramedullary devices (Gotfried PCCP [percutaneous compression plate]) in 2017-2018 were the majority of fixation devices (57.4%, n = 155). Patients treated with CMNs had a longer hospitalization period compared to extramedullary-treated patients (mean operation to discharge, 8.95 and 7.23 days, respectively). Outcome measures, mortality rates (30-day, 1-year), rehospitalization, reoperations, and postoperative complication were similar among the two study groups.

Conclusion: Although our surgical practice has changed according to the general evidence-based guidelines (decreased admission to operation periods and increased use of intramedullary nailing devices for unstable fracture patterns), our clinical outcomes regarding mortality, reoperation, and major surgical complications remained the same.