

Outcomes of Treatment for Isolated Greater Trochanteric Fractures With Occult Intertrochanteric Extension: A Retrospective Cohort of 118 Patients

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Purpose: Isolated greater trochanteric fractures are uncommon in pertrochanteric femoral fractures. MRI is recommended to confirm occult intertrochanteric fractures and prevent potential displacement. While treatment guidelines lack consensus, surgical intervention is suggested for intertrochanteric extension beyond the medial third portion. Our primary aim was to assess complications and functional outcomes of conservative treatment in patients with intertrochanteric extension beyond the medial third portion.

Methods: In this retrospective study, all patients aged 65 and above with isolated greater trochanteric fractures diagnosed by radiographs were included. Subsequently, MRI categorized the intertrochanteric area into lateral, medium, or medial portions based on extension proposed by Park. A minimum 3-month follow-up was required. Treatment decisions, surgical or conservative, were based on surgeon criteria. Rehabilitation allowed weightbearing as tolerated for both treatments. Analysis included demographic variables, complications, pre- and post-treatment functional status using the Parker mobility score, and overall mortality rate.

Results: From 2010 to 2022, 118 patients were selected, of whom 69.5% were female, with a median age of 79.8 years and a median follow-up of 13 months. Specifically, 11 patients were in the lateral portion group, 59 in the medium portion group, and 48 in the medial portion group. In the medial portion group, 33 were treated conservatively, and 15 underwent surgery. The conservatively treated medial portion group had 0% complications (95% confidence interval [CI] 0-12%). Among 60 patients with conservative treatment, 3 cases required surgical intervention for displacement. One complication occurred among 25 surgically treated patients—a superficial surgical site infection treated with surgical debridement and antibiotics. No significant Parker score difference was observed between conservative and surgical treatments in the overall series and groups. The overall mortality rate at 3 months and 1 year post-treatment was 94% (95% CI 87-97%) and 90% (95% CI 80-94%).

Conclusion: The findings suggest conservative treatment for greater trochanter fractures with occult intertrochanteric extension beyond the medial portion is safe, with no significant functional status difference compared to other groups.