

Hemiarthroplasty for Femoral Neck Fractures: Does Approach Affect Outcomes?

*Madeline Ann Sauer, BS; Michael Ewing, MD; Brett D. Crist, MD; James A. Keeney, MD; Arthroplasty for Hip Fracture Consortium
University of Missouri, Columbia, Missouri, UNITED STATES*

Purpose: The purpose of this study is to investigate postoperative outcomes between anterior, posterior, and lateral surgical approaches in hemiarthroplasty for femoral neck fractures.

Methods: 939 femoral neck fractures were treated with hemiarthroplasty from 2010 to 2021 at multiple institutions. The mean follow-up was 20 months (range, 15-25 months). Analyses were performed to examine differences in outcomes based on surgical approach including intraoperative data points, postoperative complications, and functional outcomes.

Results: Of the 939 femoral neck fractures treated with hemiarthroplasty, 70 (7.5%) were performed by direct anterior approach (DAA), 250 (26.6%) by direct lateral approach (DLA), and 619 (65.9%) were posterior approach (PA). Statistically significant differences in operative time were noted between DAA and DL (83.8 vs 104.9 min, $P < 0.0001$). Dislocations were significantly higher with PA (42, 6.7%) compared to DLA (3, 1.2%) and DAA (2, 2.7%) ($P = 0.0001$). Lower mortality was seen with DAA versus PA during the study period (31/70, 44.2% vs 384/619, 62.0%, $P < 0.0001$). The average length of stay was significantly lower for DAA (5.2 days), compared to DLA (7.2 days), and PA (7.5 days) ($P = 0.0081$). Ambulation status also varied among the different surgical approaches with DAA having a lower percentage of postoperative patients classified as nonambulatory (11/70, 15.7%) when compared with DLA (52/250, 20.8%) and PA (175/619, 28.3%).

Conclusion: In our multicenter retrospective cohort, DAA was found to have decreased operative times, decreased length of stay, and higher likelihood of ambulation prior to discharge when compared to other approaches. These differences may help lessen the morbidity and mortality associated with femoral neck fractures treated with hemiarthroplasty.