

The Impact of Dementia on Outcomes Following Hemiarthroplasty for Femoral Neck Fracture (OTA Type 31B1.3) Patients

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Purpose: Our objective was to evaluate the impact of baseline dementia on postoperative outcomes in patients with hip fracture undergoing hemiarthroplasty.

Methods: This retrospective review, conducted over the study period from 2015 to 2024, involved a 4:1 matched comparison of patients with hip fracture who underwent hemiarthroplasty for a displaced femoral neck fracture. Dementia (D) was identified from the medical record using ICD-10 codes (e.g., F01–F03, G30). Matching of non-dementia patients (ND) was based on the Score for Trauma Triage in Geriatric and Middle-Aged (STTGMA), a validated risk stratification tool that accounts for factors such as comorbidities, injury severity, physiologic parameters, and functional status to predict mortality risk in geriatric and middle-aged patients with trauma.

Descriptive statistics were used to ensure baseline similarity between groups. Outcomes analyzed included readmission rates, mortality, length of stay (LOS), revision surgery, in-hospital complications, and time to death. Statistical analyses included Student's t-tests and χ^2 tests.

Results: A total of 732 patients met inclusion criteria, with 117 D patients. Baseline similarity was observed between the D and ND groups. D patients had significantly higher readmission rates ($p = 0.000003$) and overall mortality ($p = 0.0078$) compared to ND patients. The average time to death postoperatively for D patients was 705 days (SD: 826 days). No significant differences were observed between groups for revision surgery ($p = 0.91$), infection rates ($p = 0.68$), dislocation ($p = 0.32$), LOS ($p = 0.54$), 36-hour postoperative mortality ($p = 0.32$), 48-hour postoperative mortality ($p = 0.16$), death during admission ($p = 0.38$), or death within 30 days ($p = 0.87$).

Conclusion: Dementia is associated with significantly higher readmission and overall mortality rates in patients with hip fracture undergoing hemiarthroplasty. Despite increased mortality, early postoperative outcomes and in-hospital complications did not differ significantly between the D and ND groups.