

Displaced Femoral Neck Fractures in Patients 60-69 Years Old: Mortality and Patient-Reported Outcomes in a Register Cohort

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Purpose: Displaced femoral neck fractures (FNFs) in the elderly are commonly treated with arthroplasty. Several randomized studies have compared arthroplasty and internal fixation (IF) and found better patient-reported outcome measures (PROMs) and fewer reoperations for arthroplasty. But consensus is lacking regarding which method to use in the “young” elderly patients; IF tend to fail in up to 1/3 of the cases but can offer the benefits of a biologically intact hip if successful. To add to this, revision of failed IF with secondary arthroplasty has increased risk for complications. This register study aims to describe current treatment and mortality rates for displaced hip fractures with focus on “young” elderly, aged 60-69 years. A secondary aim is to compare changes in PROMs between treatments and correlation with treatment in these younger patients.

Methods: Patient data were retrieved from the Swedish Fracture Register (SFR). Between 2013 and 2016 there were 30,999 hip fractures registered. We found 9281 FNFs classified as displaced (AO/OTA 31-B3) in patients 60 years or older. 883 patients were aged 60-69 years. In the final analysis of mortality and PROM mean differences, 723 of these met the inclusion criteria. We adjusted for age, sex, and baseline PROMs in patients treated with either internal fixation (IF) or total hip arthroplasty (THA).

Results: In the 60-69-years group, THA was used in 512 (58%), IF 211 (24%), and hemiarthroplasty (HA) in 160 (18%) of the patients. As HA patients differed from those selected to THA and IF with regard to baseline characteristics, we omitted them from the PROM analysis. Patients treated with HA had increased adjusted 1-year mortality (relative risk [RR] = 3.74, 95% confidence interval [CI] 1.39-10.1, P = 0.009). When comparing only THA and IF we found no significant differences in mortality or PROM means 1 year after injury.

Conclusion: In “young” elderly patients THA is a common treatment for displaced FNF in Sweden. Patients in this segment treated with HA differ from patients treated with THA and IF, with baseline results in PROMs indicating poorer health and function, as well as higher mortality and lower response rates. We found no differences in crude mortality between IF and THA treatment, and no significant influence from treatment on PROMs or adjusted mortality comparing THA and IF.