

## Internal fixation or arthroplasty for displaced femoral neck fractures in individuals aged 60 to 69 years?

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Which is the optimal treatment for a displaced femoral neck fracture (dFNF) in individuals around retirement age? Primary arthroplasty for dFNFs is nowadays performed in younger patients in Sweden. This study aimed to assess the cumulative rate of major reoperations and mortality at 1 year after internal fixation (IF) and primary arthroplasty, respectively.

A longitudinal cohort study on prospectively collected data included patients 60-69 years registered with a dFNF (AO/OTA31-B3, Garden 3-4) in the Swedish Fracture Register 2012-2018. Data was linked with data from the Swedish Arthroplasty Register (SAR) until December 31, 2019.

The cumulative rate of conversion to secondary arthroplasty after IF was 18% (CI 13.8-21.8) at 1 year (crude rate 63/367). For those treated with primary arthroplasty, the cumulative 1-year rate of revision was 1.8% (CI 1.0-2.6) (crude 21/1171).

The 1-year mortality was similar in both groups, 7% and 8% respectively. Regression analyses for the separate methods did not identify any risk factors for secondary surgery or death.

The 1-year conversion rate after IF in this cohort of patients 60-69 years old is markedly lower than in historical cohorts. It may reflect a more purposeful selection of patients to IF, where frailer patients and/or severe fractures are treated with arthroplasty. Still, the similar (and relatively low) mortality rate indicates that the case-mix is similar. The 1-year revision rate after primary arthroplasty is acceptable when compared to SAR data for patients treated for osteoarthritis. Both treatment methods yield acceptable results in terms of major reoperations in the short term.