

Mortality for Patients Older Than 65 Years Old After Their Treatment for a Hip Fracture: A Retrospective and Comparative Cohort Analysis Between Fractured and Non Fractured Patients

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Purpose: Elderly, frail, and patients with comorbidities are at an increased risk of mortality. Suffering a hip fracture further exacerbates this risk.

Methods: We conducted a retrospective cohort study comparing patients older than 65 years treated for a hip fracture with a matched nonfractured population (control). Both groups were adjusted using a propensity score analysis to ensure a similar distribution of potential confounders, including age, sex, Hospital Frailty Risk Score (HFRS), body mass index, corticosteroid use, and comorbidities. A Cox regression model was used to evaluate mortality at 2 and 4 years after the index event.

Results: Before propensity adjustment, the study included 8574 patients, with 2386 in the fracture group and 6188 in the control group. After adjustment, the sample consisted of 4700 individuals. Hazard ratio (HR) analysis showed a 44% increased risk of death in the fracture group (95% CI: 95%). The HR dropped significantly after 2 years, with a 24% increased risk of death in the fracture group. Notably, after 4 years, there were no significant differences in mortality between the groups. A regression analysis was performed to account for potential confounders. Among all evaluated risk factors, frailty, as measured by the HFRS, was the most significant predictor of mortality. When stratified by age, the HR for mortality was higher in patients younger than age 80 years (1.87; 95% CI: 1.38–2.54) compared to those age 90 years or older (1.39; 95% CI: 1.18–1.64).

Conclusion: Frail patients treated for a hip fracture had a 44% increased risk of mortality, which decreased to 24% after 2 years. However, survivors in the fracture group did not exhibit a significantly increased risk of death after 4 years compared to the matched control group.