What Are Predictors of Hospice Discharge with 30-Day Mortality After Surgical Fixation of Hip Fractures?

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**Introduction**

- Even with perioperative management of comorbidities involving a multi-disciplinary approach, hip fractures in the elderly are associated with significant morbidity and mortality.
- Hospice care has been shown to substantially decrease restrictions symptoms and even prolong life.
- However, there are few studies assessing discharge to hospice following surgery for hip fractures.
- The aims of this study were to determine the proportion of hip fracture patients discharged to hospice, the 30-day mortality rates of such hospice patients, and independent predictors of discharge to hospice with 30-day mortality following hip fracture surgery.

**Materials and Methods**

- A retrospective cohort study utilizing the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) was queried for all hip fractures surgeries between the years of 2016 and 2018.
- Variables assessed included patient demographics, comorbidities, perioperative characteristics, and postoperative outcomes.
- Differences between hospice and non-hospice patients were compared using chi-squared analysis or Fisher’s exact test for categorical variables and Student’s t-tests for continuous variables.
- A binary logistic regression model was used to assess independent predictors of hospice discharge with 30-day mortality.

**Results**

- Overall, 31,531 operatively treated hip fractures were identified, of which 281 (0.9%) involved a discharge to hospice.
- Patients discharged to hospice had a 67% 30-day mortality rate in comparison to 5.6% of patients not discharged to hospice \((p < 0.001)\) (Figure 1).
- Variables most significantly independently associated with increased odds of hospice discharge with 30-day mortality included disseminated cancer, totally dependent functional status, >10% weight loss in the 6 months prior to surgery, preoperative cognitive deficit, and full medical comanagement (Table 1).
- Variables independently associated with decreased odds of hospice discharge with 30-day mortality were increasing preoperative albumin, increasing BMI, and implementation of an institutional standardized care pathway (Table 1).

**Conclusions**

- Overall rates of discharge to hospice in hip fracture patients are low but the 30-day mortality rate is high for patients that are discharged to hospice.
- Disseminated cancer, dependent functional status, >10% weight loss over six months preoperatively, and preoperative cognitive deficit were the strongest predictors of hospice discharge with 30-day mortality following hip fracture surgery.
- An awareness of these associations is important for surgeons to consider when discussing postoperative expectations and outcomes with these patients.

**References**