Stratification of 1-Year Functional Outcome and Mortality in a Cohort of Geriatric Trauma Patients: The Power of STTGMA

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Purpose: It is well established that elderly trauma patients are at increased risk of poor long-term functional outcome compared to their younger counterparts. In this study, we sought to determine if a novel inpatient mortality risk assessment tool designed to be calculated at the time of admission predicts patient-reported functional outcomes and mortality at 1 year.

Methods: From October 1, 2014 to September 30, 2015, 685 patients >55 years old who were orthopaedic surgery consults or trauma surgery consults were enrolled in a prospective database. On initial evaluation, each patient's demographics, injury severity, and functional status were utilized to calculate a trauma triage score (STTGMA, or Score for Trauma Triage in the Geriatric and Middle-Aged Orthopaedic Trauma Patient). Patients were contacted at 1 year to complete an EQ-5D questionnaire and report their percent return to baseline function. Higher EQ-5D index scores denote better function. Patients were stratified into minimal, low, moderate, and high-risk cohort groups based on inpatient mortality risk of <1.1% (145 patients), 1.1-4% (83 patients), 4-50% (48 patients), >50% (16 patients).

Results: 247 patients (36.1%) were successfully contacted at 12-month follow-up. 45 (6.6%) patients had died within the year following index hospitalization. There was no observed difference between patients who were successfully contacted and those who were lost to follow-up. The mean STTGMA score was 2.6 ± 6.2%. Patients reported on average a 76.4 ± 27.5% return to baseline function with 43% of patients reporting that they were back to their baseline level of function. Minimal risk patients had significantly higher 1-year EQ-5D index scores (0.79 ± 0.20, 0.67 ± 0.32, 0.60 ± 0.30; P<0.0001) for minimal, low, and moderate risk patients, respectively. There was also a significant difference in percent return to baseline functioning (80.1 ± 25.2% for minimal risk, 73.7 ± 29.5% for low risk, and 62.7 ± 31.9% for moderate risk; P = 0.009). The Kaplan-Meier curve shows that high risk patients had pronounced decreased survival within the initial days after discharge compared to other cohorts.

Conclusion: This study demonstrates that patients identified with the STTGMA tool as having an increased risk of inpatient mortality following trauma correlate with poorer functional outcomes at 1 year. The STTGMA risk score is also a valuable tool to predict mortality up to 1 year following discharge. The ability to assess long-term function and mortality prior to inpatient admission allows for an informed discussion with patient and family regarding expected long-term recovery and goals of care.

POSTER ABSTRACTS