Posttraumatic Stress Disorder Following Geriatric Fragility Fractures

Zachery Hong, MD*; Carol Lin, MD*

Purpose: The psychosocial impact of fragility fractures among elderly patients is poorly understood. We sought to determine the incidence of posttraumatic stress disorder (PTSD) in geriatric patients who sustain fragility fractures, as well as to identify prognostic factors that might identify those at risk of developing the condition.

Methods: Between June 2021 and June 2022, the Primary Care PTSD Screen for the Diagnostic and Statistical Manual for Mental Disorders, Fifth Edition (DSM-5) (PC-PTSD-5) was used to screen 362 geriatric patients (≥65 years) treated for fragility fractures at a single outpatient orthopaedic clinic associated with an urban Level I trauma center. All patients sustained low-energy fractures of the appendicular skeleton or pelvis managed by an orthopaedic trauma specialist and were followed by the institution's fracture liaison program. Bivariate analyses were employed to evaluate demographic and injury characteristics associated with development of PTSD, and a multivariable logistic regression model was used to identify risk factors for positive PTSD screens.

Results: 10% (37/362) of patients screened positive for PTSD at a median time of 51 days (interquartile range [IQR], 19 to 75) after initial injury. On bivariate analyses, there were no statistically significant effects of gender (odds ratio [OR] 0.98, confidence interval [CI] 0.45 to 2.17, P = 0.97), race (P = 0.85), age at injury (P = 0.50), initial mode of presentation (inpatient vs outpatient: OR 0.73, CI 0.35 to 1.50, P = 0.39), treatment method (operative vs nonoperative: OR 1.65, CI 0.77 to 3.53, P = 0.19), or length of stay (P = 0.93) on positive PTSD screens. There was no statistically significant relationship between fracture location and development of PTSD (P = 0.94). Finally, no positive predictors for PTSD could be identified in a multivariable logistic regression model, which included fracture location, race, gender, and initial mode of presentation.

Conclusion: Orthopaedic providers must be aware of the possibility of PTSD, even in fragility fractures, so appropriate mental health resources can be provided. Further investigation into the risk factors for PTSD is required, and should consider additional factors such as cost, social determinants of health, and weightbearing status.