

Post-Traumatic Stress Disorder Following Geriatric Fragility Fractures

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INTRODUCTION:

The psychosocial impact of fragility fractures among elderly patients is poorly understood. We sought to determine the incidence of post-traumatic stress disorder (PTSD) in geriatric patients who sustain fragility fractures and investigate relationships between PTSD and patient-reported outcomes during recovery.

METHODS: Between June 2021 and June 2022, the Primary Care PTSD Screen for *DSM-5* (PC-PTSD-5) was used to screen 361 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 used to determine prognostic factors associated with positive PTSD screens, and relationships between PTSD and scores on the Patient-Reported Outcomes Measurement Information System (PROMIS) were investigated.

RESULTS:

Ten percent (37/361) of patients screened positive for PTSD at a median time of 59 days (IQR, 17 to 69) after initial injury. Bivariate analyses revealed the only demographic, injury, or treatment characteristic significantly associated with a positive PTSD screen was presence of a pre-existing psychiatric comorbidity ($p=0.04$). During their recovery, patients experienced PROMIS Physical Function and Pain Interference improvements of 0.02 and 0.01 points per day, respectively. However, those who screened positive for PTSD had significantly greater baseline pain by 4.6 points. Additionally, PROMIS Depression scores did not significantly improve over time; however, those who screened positive for PTSD had greater baseline depression by 5.9 points.

DISCUSSION AND CONCLUSION:

There is a notable incidence of PTSD in elderly patients who sustain fragility fractures. Furthermore, PTSD has significant impacts on the recovery process, particularly with respect to pain. Further investigation into the risk factors for PTSD, and the effectiveness of mental health interventions to treat this disease, must be studied.