

Early Detection of Posttraumatic Stress Disorder in the Inpatient Setting*David Zuelzer, MD; Geyner Andres Gaona, BS; Garrett Shaw Dennis, BS;**Stephen James Warner, MD**University of Texas Health Science Center at Houston, Houston, Texas, UNITED STATES*

Purpose: Our purpose was to examine the prevalence of posttraumatic stress disorder (PTSD) in adult patients immediately following acute orthopaedic trauma within 72 hours from admission. We hypothesize that PTSD symptoms can be detected within the first 3 days following major musculoskeletal trauma at a rate comparable to historical controls.

Methods: This was a prospective observational study at a single, Level I trauma center. 331 patients admitted over a 3-month period were enrolled with an injury requiring orthopaedic trauma service co-management. We distributed freely available, rapidly applied, previously validated questionnaires to all patients within 72 hours of admission. The outcome of interest was the rate of positive screening score. Patients completed the Primary Care – Posttraumatic Stress Disorder Screen (PC-PTSD) for DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition). It is a previously validated screening questionnaire for PTSD symptoms with high sensitivity and specificity values for cutoff score of 3 (sensitivity 0.75; specificity 0.86). The PTSD Checklist (PCL) is a 17-item questionnaire reflecting symptoms of PTSD. It has been validated as a self-reporting measure giving a quantitative score of symptom severity of PTSD related to the DSM-5 with high convergent validity with moderate to high correlations with clinician-administered PTSD tests and the Mississippi PTSD Scale.

Results: The majority of patients (67.1%) had a high-energy mechanism of injury such as fall >2 feet (3.3%), motor vehicle collision (25.4%), motorcycle collision (7.8%), automobile versus pedestrian (7.0%), or gunshot wound (11.2%). Injuries included closed fracture of an extremity (67.7%), open extremity fractures (15.7%), and pelvic or acetabular injuries (12.7%). Using a previously validated PC-PTSD cutoff score of 3, 60 of 331 patients (18.1%) given the PC-PTSD survey screened positive. All 60 patients scoring positive on the PC-PTSD survey were administered the confirmatory PCL. 59 of 60 (98.3%) were confirmed positive with scores greater than 45 (median 52; range, 42-71). In our study, 59 of 331 patients (17.8%) screened positive. Patients screening positive for PTSD were more likely to be young (37.7 years versus 46 years, $P = 0.016$) and have prior substance use disorder (11.7% vs 4.1%, $P = 0.028$) and trended toward being male and spending more days in hospital.

Conclusion: These results are similar to historical controls and suggest there may be a role for screening for PTSD symptoms early in the inpatient setting. The advantages of such an approach may include early diagnosis and intervention, coordinating follow up, and greater optimization of care and explanation of long-term risk.