

**Preoperative Depression is Associated with Increased Complications Following Pilon Fracture Surgery**

Matthew S. Broggi, MD<sup>1</sup>  
Syed Tahmid, BS<sup>1</sup>  
Jerad Allen, MD<sup>1</sup>  
Roberto Hernandez-Irizarry, MD<sup>1</sup>

<sup>1</sup>Emory University Department of Orthopaedics  
59 Executive Park South, Suite 200  
Atlanta, GA 30329

Corresponding Author  
Matthew Broggi, MD  
49 Jesse Hill Jr Dr.  
Atlanta, GA 30303  
404-641-3173  
mbroggi@emory.edu

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No author listed above has a financial conflict regarding the materials/substance of the submitted article.

**INTRODUCTION:** Given the increased survival of the polytrauma patient, the incidence of tibial pilon fractures has increased. Preoperative depression has been linked with worse morbidity and mortality following lower extremity surgery, however its effect on outcomes following tibial pilon fractures has not been studied. The purpose of this study was to investigate the relationship between preoperative depression and potential complications following tibial pilon fracture surgery.

**METHODS:** This retrospective study utilized the national Truven Marketscan claims database to identify patients who underwent outpatient tibial pilon fracture surgery from January 2009 to December 2018 based on Common Procedure Terminology (CPT) codes. The two cohorts entailed patients with and without preoperative depression based on International Classification of Diseases (ICD) codes. The association between preoperative depression and common postoperative complications following tibial pilon fracture was analyzed using chi square testing and multivariate analysis.

**RESULTS:** In total, 4,795 patients were identified for analysis. In those patients with preoperative depression, the complications associated with the greatest increased odds were infection (OR 1.59,  $p < .01$ ); wound complication (OR 1.31,  $p < .01$ ); ED visit pain (OR 1.29,  $p < .01$ ), hardware complications (OR 1.22,  $p < .01$ ); DVT/PE (OR 1.14,  $p < .01$ ).

**CONCLUSIONS:** Increased complications and use of healthcare resources have been associated following tibial pilon fracture surgery in persons with a preoperative diagnosis of depression. Acknowledgement of patient's preoperative depression can allow surgeons to tweak treatment protocols before and after surgery. Additional studies should be conducted to investigate the degree of modifiability of depression as a risk factor.