

## **Operative Stabilization of Fragility Fractures of the Pelvic Ring Improves Patient Ambulatory Status**

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**Purpose:** Fragility fractures of the pelvis (FFP) are increasing in incidence alongside the growing geriatric population. While historically treated nonoperatively, there is mounting evidence that operative stabilization of FFP leads to improved outcomes. This study aims to determine whether operative stabilization of FFP is associated with improved 1-year mortality, ambulatory status, and hospital length of stay (LOS).

**Methods:** We performed a retrospective cohort study assessing patients over the age of 55 years with an FFP from 8 Level I trauma centers. Patients with high-energy mechanisms of trauma or ISS > 19 were excluded from analysis. The primary outcome measure was 1-year mortality. Secondary outcomes were return to baseline ambulatory status (independent, assistive walking device, wheelchair) at final follow-up and hospital LOS. Propensity score matching was performed to create operative and nonoperative cohorts. Bivariate analysis was performed on outcome measures between the matched cohorts.

**Results:** After screening, 180 patients were included in the study, 40 of whom underwent operative management. After 1:1 matching, the overall median age was 70.5 years (interquartile range [IQR] 63-82), median ISS was 9 (IQR 8-10), and 78.8% (n = 63) of patients were female. There were no significant differences in age, sex, body mass index, Charlson Comorbidity Index, baseline ambulatory status, Beckmann pelvic ring score, or follow-up duration between the cohorts. There were no significant differences in 1-year mortality in the operative (5%, n = 2) and nonoperative (10%, n = 4) group (odds ratio [OR] 0.47; 95% confidence interval [CI] 0.08-2.75; P = 0.400). Return to baseline ambulatory status is significantly greater in the operative cohort at 87.5% (n = 35) compared to 67.5% (n = 27) in patients nonoperatively treated (OR 3.4; 95% CI 1.1-10.6; P = 0.032). Mean hospital LOS is significantly greater in the operative cohort (7.1 days) compared to nonoperative cohort (3.0 days) (mean difference 4.2; 95% CI 2.3-6.0; P < 0.001).

**Conclusion:** Patients with FFP who undergo operative stabilization have a greater odd of returning to baseline ambulatory function. However, operative management is also associated with a longer hospital stay. Improvement in 1-year mortality with operative management failed to reach statistical significance.