

Surgical Fixation Increases Work Productivity Over Nonoperative Management of Lateral Compression Pelvis Fractures: Secondary Analysis of a Prospective Clinical Trial

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Purpose: This study aimed to quantify work impairment and economic losses due to unemployment, missed work (absenteeism), and decreased work productivity (presenteeism) following a lateral compression pelvic fracture. We hypothesized that patients would have greater work productivity over the year following injury after surgical fixation than nonoperative management.

Methods: Adult patients with a lateral compression pelvic ring injury consisting of a complete posterior fracture and <1 cm of displacement were enrolled in the primary prospective trial at 2 centers. This secondary study analyzed the 64-patient subset (mean age, 42 years [standard deviation (SD), 17]; 38% male) who were employed before the injury. Study participants were treated with either surgical fixation or nonoperative management; 44% were randomized and combined with patients who refused to be randomized but selected their treatment (to minimize surgeon selection bias). The primary outcome was the total hours worked in the year, calculated from cumulative weekly estimates accounting for patient-reported absenteeism and presenteeism on the Work Productivity and Activity Impairment Questionnaire—Specific Health Problem (WPAI-SHP). The primary comparison was surgical fixation versus nonoperative management. We calculated confidence intervals and P values with nonparametric bootstrap sampling. Additionally, we estimated economic losses using the 2021 US Bureau of Labor Statistics average wage index.

Results: 77% of patients (23/30) treated with surgical fixation and 50% of patients (17/34) after nonoperative management returned to work in the year. Patients averaged 925 productive work hours after surgical fixation compared to 497 after nonoperative management (428-h difference; 95% confidence interval [CI]: 386-448; $P < 0.01$). Surgical fixation protected against \$17,266 (95% CI: \$15,559-\$18,060; $P < 0.01$) in economic loss per patient compared to nonoperative management (\$46,589 vs \$63,854 annual impact). Surgical fixation was associated with less unemployment than nonoperative management (898 vs 1468 h lost) but greater presenteeism (218 vs 81 h lost). Absenteeism was uncommon and similar between surgical fixation and nonoperative groups (39 vs 34 h lost).

Conclusion: Among patients with lateral compression pelvis fractures, surgical fixation was associated with a significant reduction in work impairment and the corresponding economic burden compared to nonoperative management. This difference was driven primarily by an earlier return to work.