

Percutaneous Transiliac-Transsacral Fixation of Sacral Insufficiency Fractures Improves Ambulation and Rate of Disposition to Home

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Purpose: With the increasing geriatric population, sacral insufficiency fractures are becoming more prevalent. While these fractures are typically stable and do not meet absolute surgical indications, they can cause significant pain and inability to ambulate. In this vulnerable population with multiple comorbidities, this can lead to complications as well as the need for nursing home placement. The purpose of this study is to determine whether percutaneous sacral fixation improves ambulation and the rate of disposition to home after admission.

Methods: All low-energy, isolated sacral insufficiency fractures over a 1-year period from August 1, 2015 to August 1, 2016 at a single academic institution were reviewed. Exclusion criteria included high-energy mechanism, age <60 years, presence of other injury or medical condition preventing ambulation, inability to ambulate prior to injury, living in a facility prior to injury, and presence of an unstable sacral fracture meeting absolute surgical indications. All patients underwent a trial of conservative management with physical therapy and pain medication. If unable to ambulate or severe posterior pelvic pain with ambulation was present, patients were offered percutaneous transiliac-transsacral screw fixation of their sacral fracture.

Results: 41 patients were included in the study, of whom 16 underwent surgery and 25 were treated nonoperatively. Preoperative characteristics including age, gender, and Charlson Comorbidity Index scores were similar between the 2 groups. Of the patients treated operatively, 12 of 16 (75%) were discharged to home, compared to 5 of 25 (20%) in the nonoperative group ($P = 0.0009$). All of the patients treated operatively were able to ambulate on postoperative day 1, compared with only 18 of 25 (72%) of the nonoperative patients being able to ambulate at any point during their admission. Average surgical time was 34 ± 15 minutes, and there were no intraoperative or postoperative complications related to surgery. Length of stay was similar between the 2 groups (4.0 days in operative group vs 4.2 days in nonoperative group).

Conclusion: Percutaneous transiliac-transsacral screw fixation of sacral insufficiency fractures leads to improved ambulation and an increased rate of disposition to home. Surgery should be offered to patients who fail to ambulate with physical therapy and to those with severe posterior pelvic pain with ambulation.