

Pelvic Ring Fractures in the Elderly Treated with a Branded Implant

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Purpose: Our objective was to evaluate the clinical results, hospital stay, and return to function after treating anterior pelvic ring fractures in geriatric patients with a branded implant. A growing geriatric patient population with increased incidence of low-energy pelvic fractures has led us to find alternative and potentially improved means of fracture fixation.

Methods: This was a single-center retrospective observational study of 56 patients (February 2015 to November 2019) treated with a branded implant. The patient-conforming implant is introduced through a small suprapubic incision of ~3 cm at the symphysis. The implant is delivered into the superior ramus up to and/or over the acetabular dome spanning the fracture. Fracture patterns involving the posterior pelvic ring were additionally treated with an iliosacral screw. The median age was 82.1 years (range, 51-100), 79% of the patients were female, and the median American Society of Anesthesiologists class was 2.9. 38 patients (68%) also had concomitant posterior sacral screw fixation. All of the fractures were caused by low-energy trauma. The fracture pattern was Ia in 17 patients (30%), Ib in 2 (4%), IIb in 3 (5%), IIc in 14 (25%), IIIb in 4 (7%), and IIIc in 16 (29%).

Results: Time from fracture to surgery averaged 5.1 days, and average procedure time was 83 minutes, from anesthesia to skin closure. 46 patients (88%) were ambulatory from the first postoperative day and returned to their home for independent living. Seven patients (12%) were newly dependent on nursing care at time of discharge from the hospital. Hospital stay averaged 7.9 days (range, 2-25 days). The flexibility of the delivery system allowed for the treatment of complex fractures at the anterior symphysis typically treated in our institution with plates. While not specifically measured, patients appeared to experience less postoperative pain, used less postoperative pain medications, and were able to ambulate sooner than with plate osteosynthesis.

Conclusion: Our results treating geriatric patients with a branded implant are quite positive. Good clinical function was demonstrated with the use of a branded implant, and patients also experienced a low degree of complications. The flexible nature of the catheter allows for precise positioning of the implant, allowing for the treatment of more complex cases, providing the stability of intramedullary nailing with the flexibility of balloon catheters. The reduced incisional size and minimal postoperative pain allows elderly patients to regain mobility faster and decrease costs for the health-care system as they may be discharged to their homes faster. While promising, further investigations must be conducted.