

## Posterior Fixation with Prior Lumbosacral Fusion Treatment with the CurvaFix® IM System

Brett D. Crist, MD | University of Missouri

### CASE PRESENTATION

A 69-year-old female fell toward her right side into a door frame 3 weeks prior to initial presentation. The patient was tender to palpation on the right pubic ramus and had limited rotation of the right hip due to pain, but was not tender to palpation posteriorly over her sacrum or sacroiliac joints. The patient had a prior lumbosacral fusion and prior bilateral knee arthroplasty. The patient had significant comorbidities, including type 2 diabetes, multiple sclerosis, hypertension, and obesity (BMI of 40). Prior gastric bypass increased her risk of osteoporosis. There was no significant displacement of the right rami fractures and no rotational deformity; therefore, nonoperative management was chosen. She was also referred for bone health evaluation and management.

### DIAGNOSIS

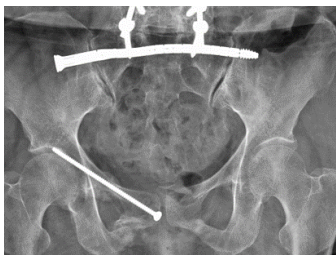
At 5 months post injury the patient was hospitalized for heart failure. Her daily function was declining, her pelvic pain was significant despite use of a walker, and she had not followed through with her bone health evaluation. Posterior ring fixation was indicated to stabilize the segment and improve her pain. Prior lumbosacral fusion limited the available real estate in S1, but fixation in S2 increased the risk of a peri-implant insufficiency fracture.

### CURVAFIX IM IMPLANTS

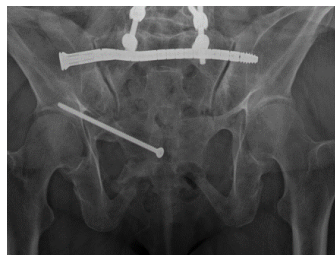
Despite limited real estate, a CurvaFix IM Implant was successfully placed across the S1 corridor for transiliac-transsacral fixation. The case was completed with a right retrograde ramus screw as the corridor was too small for the 9.5 mm CurvaFix implant (the newly FDA approved 7.5 mm implant was not available at this time).

### FOLLOW-UP

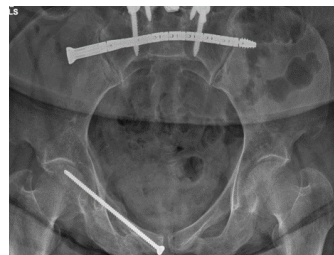
The patient was immediately allowed to weight bear as tolerated. The patient resumed her anticoagulation medication for heart issues and was referred again for a bone health evaluation and management. At her 3 week follow up, the implant remained in place and her pelvic pain had improved. At 5 weeks, the patient presented to the emergency room after another fall, but did not have any change in pelvic pain. At 6 weeks, there was evidence of bridging callus on the pubic ramus fracture and the patient had no groin pain with hip range of motion. This was significantly better than prior to surgery.



6-week follow-up



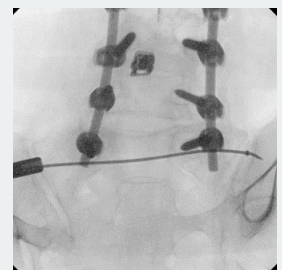
6-week follow-up



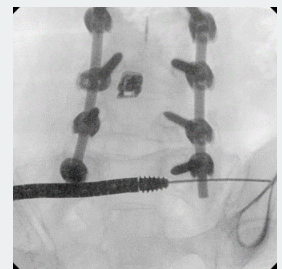
6-week follow-up



Preoperative



Intraoperative navigation of the wire across S1



Intraoperative insertion of the implant into S1

### KEY POINTS

- The CurvaFix IM Implant and procedure successfully navigated challenging anatomy with prior lumbosacral fusion hardware in place.
- The CurvaFix IM implant follows and fills the curved intramedullary space of the poor bone quality and converted to a rigid state, yielding strong, stable fixation throughout the patient's pelvis—maintaining reduction and reducing the risk of pullout.
- The CurvaFix IM Implant and procedure resulted in pain relief in a patient that had worsening pain and limited activities of daily living after failed nonoperative management.