

Spondylopelvic Dissociation Treatment with the CurvaFix® IM System

Samir Mehta, MD | University of Pennsylvania

CASE PRESENTATION

A 65-year-old female with diffuse large B cell lymphoma sustained a spondylopelvic dissociation after a fall. The patient had known lytic lesions throughout the body, including the pelvic ring. Prior to the fall, the patient was walking and living independently at home with little to no pain. For three days after the fall, the patient was unable to tolerate any weight, even with modified weight bearing and a walker. Her condition was not improving with bed rest alone; her pain was getting worse with a dramatic loss in function.

DIAGNOSIS

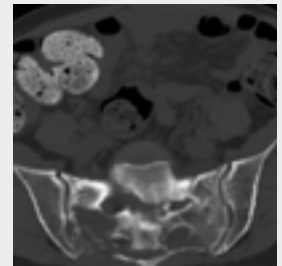
Axial CT showed multiple lytic lesions in the posterior pelvic ring. The sagittal view showed a kyphotic deformity concerning for possible neurological involvement (impingement on the sacral roots), although she had no acute findings. The patient was undergoing chemotherapy and radiation therapy, with a mixed prognosis from oncology. She was frail and thin due to suboptimal nutrition. It was important to the patient that she maintain her quality of life and independence; therefore, surgery for posterior pelvic ring fixation was discussed.

CURVAFIX IM IMPLANTS

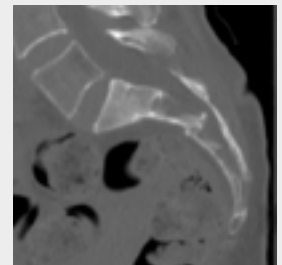
- Posterior pelvic ring fixation with the CurvaFix IM Implant offers entry point flexibility as well as posterior stability with limited risk of neurological injury.
- A guidewire was placed in the upper sacral segment, followed by a second wire in the second segment prior to the implant being inserted to maintain visibility throughout the procedure.
- CurvaFix IM Implants were then placed in both S1 and S2.

FOLLOW-UP

The patient was immediately weight bearing as tolerated. At 4 weeks, the patient was at home walking independently with an improvement in pain. At 4 months, the patient was not taking any pain medication despite pain from the metastatic lesions, and was considering a next round of radiation treatment in the pelvis.



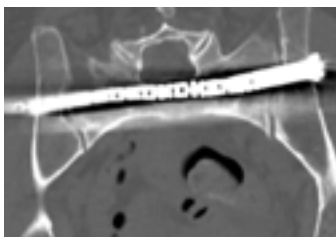
Preoperative axial CT with bilateral pathologic sacral fractures



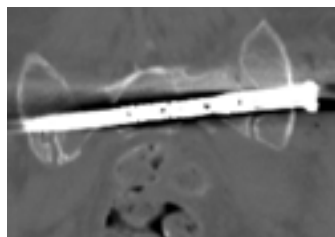
Preoperative sagittal CT with sacral fracture and kyphotic deformity



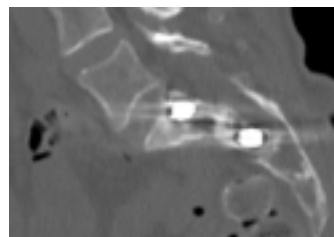
Intraoperative fluoroscopic inlet view with wire placement at S1 and S2



Postoperative CT - implant across S1



Postoperative CT - implant across S2



Postoperative CT - sagittal view

KEY POINTS

- Passing both guidewires prior to implantation of hardware ensures good visibility during the insertion of the second guidewire, particularly on the inlet view.
- The curved implant is more forgiving in terms of entry point location and maneuverability through the osseous pathways. This was a significant advantage over straight, rigid implants especially in a patient with compromised bone quality.