CASE STUDY

Fragility Fractures - Malunion and Nonunion

Treatment with the CurvaFix® IM System

John Michael Yingling, DO | University of Oklahoma

CASE PRESENTATION

A 79-year-old female presented as a referral from a neurosurgeon. The patient was an independent ambulator without assistive devices earlier in the year. She sustained a ground-level fall and presented to an outside facility. She was diagnosed with pelvic ring fractures treated nonoperatively. She subsequently had low back and groin pain requiring her to use a walker.

Over the course of 3-6 months she developed progressive back pain, sitting imbalance, and urinary incontinence, in addition to a few incidences of subclinical falls. She was referred to a urologist and spine surgeon by her primary care physician, where a CT was obtained. She was then referred to our clinic for pelvic ring fractures of indeterminate stages and delayed union. By the time of our evaluation, she was wheelchair bound and could not stand when prompted due to pain.

DIAGNOSIS

Low energy fragility fractures of the pelvis and sacrum with malunion and nonunion. Comminuted bilateral complete zone I sacral insufficiency fractures with sclerosis, incomplete union, and subtle vertical and posterior deformity. Left ischial and pubic ramus fractures with hypertrophic nonunion and right pubic body and ischial fractures. Bilateral vertical hemipelvis and left internal rotation deformity.

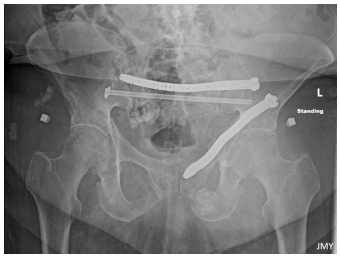
CURVAFIX IM IMPLANTS

- Curved intramedullary implants were indicated due to non-linear osseous corridors and insufficient bone quality to allow safe implant placement and immediate weight bearing.
- A left-to-right transiliac-transsacral CurvaFix IM Implant and a left-sided antegrade anterior column CurvaFix IM Implant. The case was completed with a right-to-left straight screw.

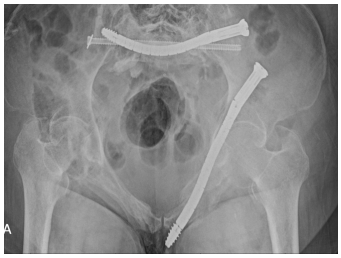
FOLLOW-UP

The patient was designated weight bearing as tolerated immediately postoperatively. She ambulated with physical therapy the day of surgery and left the hospital postoperative day 1 without any assistive devices. She has been ambulating independently ever since and had no issues at most recent 3-month follow-up, with signs of interval increased radiographic calcification.

Preoperative



3-month follow-up (AP)

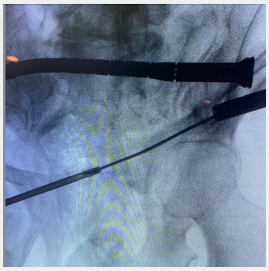


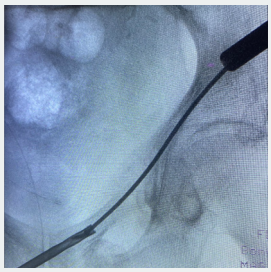
3-month follow-up (inlet)

KEY POINTS

- The CurvaFix IM Implant and procedure resulted in pain relief and a return to independent ambulation in a patient that had worsening pain and was wheelchair bound after failed nonoperative management.

Intraoperative retrograde rigid cannulated drill bit docking technique

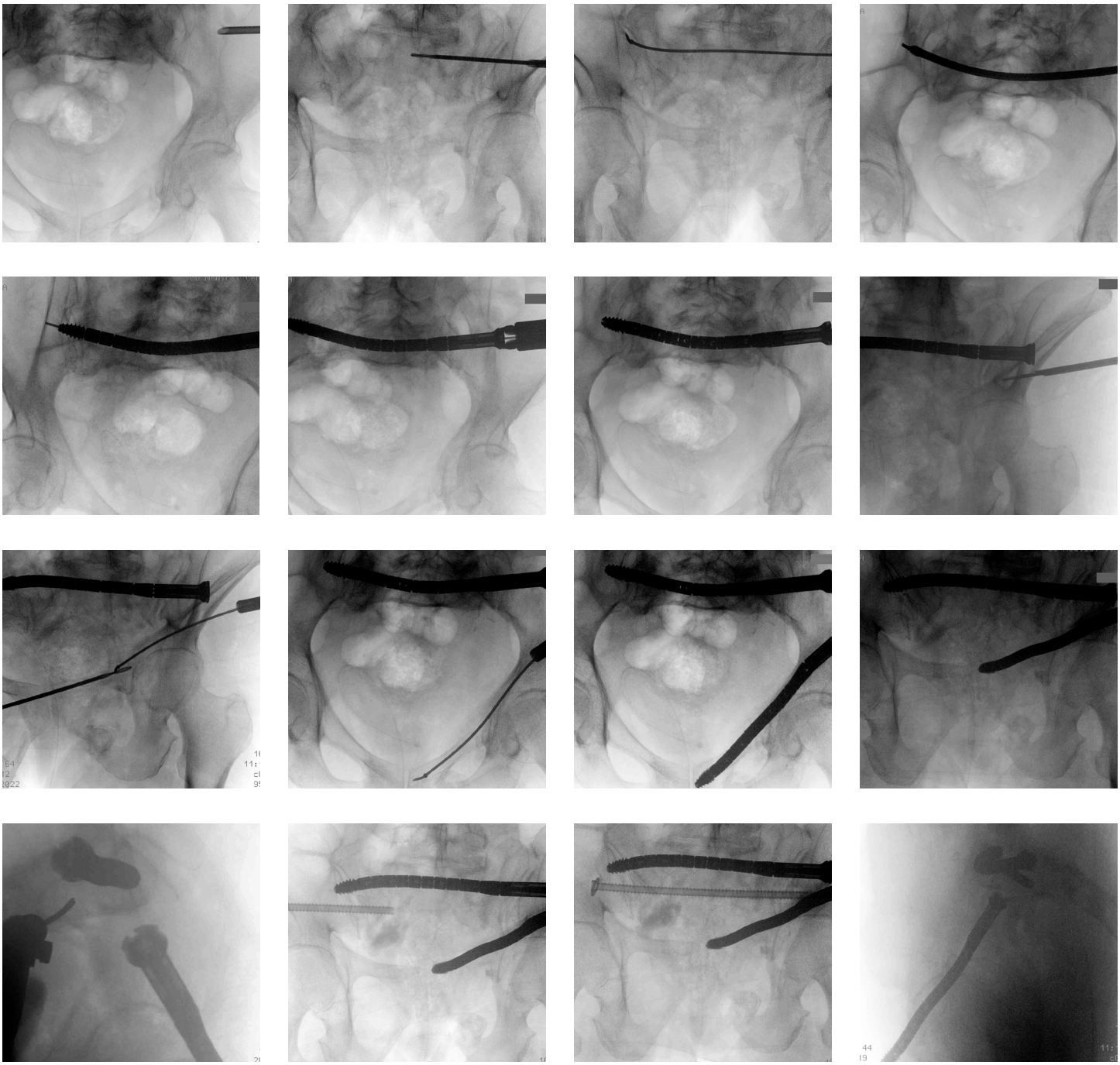




CASE STUDY

Fragility Fractures - Malunion and Nonunion

Treatment with the CurvaFix® IM System

John M. Yingling, DO | University of Oklahoma

SERIAL INTRAOPERATIVE IMAGES