

A Heavy Price To Pay For Doing Monkey Business, A Case Report

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INTRODUCTION:

Sacral bone fractures are uncommon, especially vertically unstable type. In this case, we chose to perform iliosacral screw with posterior transiliac plating for added stability for the sacral bone fracture with extension to opposite side ala oblique and spinal bifida at S1.

CASE REPORT:

The patient is a 28 year old fisherman, he fell down when attempted to pluck coconut. Physical examination showed tenderness at pelvic region, with swelling and deformity of his left elbow. He had no neurology deficits. X-ray showed left elbow dislocation, left superior pubic rami and sacral bone fracture. Incidentally, we also noted that patient has spinal bifida of S1. CT scan had revealed S1, S2, S3 and S4 vertebra body fractured, transversing respective sacral foramina, sparing S5 and coccyx bone. The fracture is classified as unstable Denis classification zone 2 fracture. Furthermore, fracture is seen to be extending obliquely to the right ala of sacrum.

MANAGEMENT:

We proceeded with iliosacral screw fixation , augmented with posterior transiliac reconstruction plating, using 4.5mm Synthes reconstruction plating via posterior approach . Intra operative was uneventful. Patient recovered well with no complication. He ambulated with wheel chair for 6 weeks, followed by 6 weeks partial weight bearing with crutches. He could walk without support after 3 months. His surgical wounds healed well.

DISCUSSIONS:

Sacral bone fractures are associated with high incidence of neurological deficit with injury to sacral nerve roots. Percutaneous iliosacral screw fixation is commonly used. Another method is posterior pelvic plating which applied tension band principle, provided the anterior sacral cortex is intact. His fracture traverse throughout the sacrum, extending

oblique to opposite side, either of the methods alone is insufficient. Thus we decided to combine both fixations for greater stability. Studies showed this combination gives better quality of reduction and lower rates of malunion with acceptable rate of soft tissue complications. The biomechanics of the construct was tested in stimulation, using synthetic pelvis, showing that combination of sacroiliac screws and posterior transiliac plating has far superior stability in withstanding rotation around mediolateral and translation along craniocaudal axis. Pelvic reconstruction system could be a better option, but patient unable to afford the expensive implant.

CONCLUSION:

Fixation of sacral bone fractures using combination of iliosacral screws and posterior transiliac plating is viable yet affordable option. It provides adequate stability biomechanically, as seen in this case.

REFERENCES:

1. Biomechanical testing of a concept of posterior pelvic reconstruction in rotationally and vertically unstable fractures; O. Berber, A. A. Amis, A. C. Day; J Bone Joint Surg [Br] 2011;93-B:237-44
2. Outcome and complications of posterior transiliac plating for vertically unstable sacral fractures. Takashi Suzuki, David J. Hak, Bruce H. Ziran, Scott A. Adam, Philip F. Stahel, Steven J. Morgan, Wade R. Smith. Injury, Int. J. Care Injured 40 (2009) 405–409