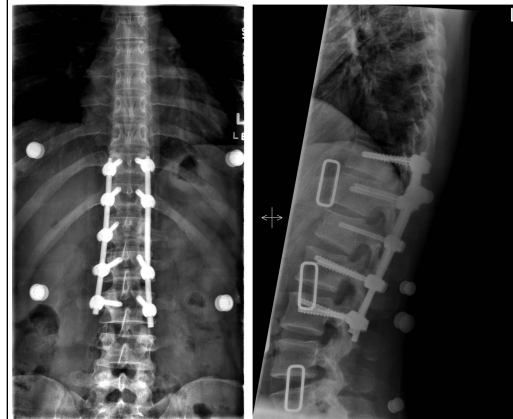


Over the past 3 years, PPS has been used in 30 cases of thoracic and lumbar fractures. These fractures extended from T5-L5. Twelve patients had flexion-distraction injuries, 8 patients had burst fractures, 6 patients had extension fractures, 3 patients had fracture dislocations, and 1 patient had a flexion compression fracture.

There were no neurological complications in any of these patients. The average hospital stay was 7 +/- 5 days. The average improvement in deformity was estimated at 6.6 degrees on the sagittal images. The neurologic status based on the ASIA scale remained the same postoperatively and at the time of the initial follow-up, except for one patient for whom the scale improved from D to E. One patient had to be taken back to the operating room for revision of a pedicle screw, and another patient with associated risk factors developed spinal infection distant from the site of surgery.

CT thoracolumbar without contrast for a 24 year-old male with L1 Chance fracture and disruption of the posterior ligamentous complex.



PPS instrumentation is appropriate in the treatment of spine trauma where direct decompression is not necessary, as in flexion distraction injuries and extension fractures. Here we show good initial results from PPS when dealing with a variety of spine fractures, although long-term follow-up is needed.

By the conclusion of this session, participants should be able to describe the importance and effectiveness of minimally invasive surgery with PPS instrumentation in the treatment of spine trauma.

1. Grossbach AJ, et al. Flexion-distraction injuries of the thoracolumbar spine: open fusion versus percutaneous pedicle screw fixation. *Neurosurg Focus* 2013;35:1-6.
2. Ni WF, et al. Percutaneous pedicle screw fixation for neurologic intact thoracolumbar burst fractures. *J Spinal Disord Tech* 2010;23:530-537.
3. Verlaan JJ, et al. Surgical treatment of traumatic fractures of the thoracic and lumbar spine: a systematic review of the literature on techniques, complications, and outcome. *Spine (Phila Pa 1976)* 2004;29:803-14