

PERCUTANEOUS SHORT SEGMENT ADULT DEFORMITY TREATMENT USING THE VIPER2 SYSTEM

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History of Present Illness and Radiographs:

- 57 year old male presented with a bilateral back, buttock and thigh pain and reports symptoms had progressively worsened for the last 5 years
- The patient had been treated with physical therapy, NSAIDS and epidural injections, but these treatments had become ineffective over last year
- Imaging revealed the presence of a 30° degenerative scoliotic curve in the lumbar spine (Figures 1 and 2)



Figures 1 and 2: AP and lateral views

Treatment Method and Materials:

- Interbody fusions and releases of the deformity were performed at the L2 - L5 disc spaces using a lateral approach
- The patient was then flipped and the SPOTLIGHT tubular retractor system was used to posteriorly decompress areas of lateral recess stenosis at the L2 - L5 levels. Bilateral decortication of the facet joints for fusion was also performed at L2 - L5 at this time
- Using the same skin incisions, seven percutaneous VIPER pedicle screws were placed under fluoroscopic guidance at the L2, L3 (unilateral), L4 and L5 levels
- Two 200mm straight VIPER2 rods were cut and contoured using the tops of the screw extensions as a guide
- The rods were placed percutaneously and once in place, VIPER2 reduction and compression instruments were used to help correct the sagittal and coronal alignment
- The total anesthesia time for both stages of the surgery was 4.5 hrs and the blood loss was 150cc's

Follow-up Results:

- Patient was mobilized to a chair the evening of surgery and discharged on postoperative day two
- By post-op week two, he reported good relief of his pre-operative symptoms and was able to resume normal work functions, including attending a conference in another state by week three
- At one year, radiographs demonstrated a solid fusion at all operative levels (Figures 3 and 4)
- Presently, he reports excellent pain relief and has resumed an active life style

The VIPER2 System allows for minimally invasive treatment of adult degenerative scoliosis, while still achieving satisfactory reconstruction and alignment. The decreased muscle trauma afforded by the system allowed this patient to quickly return to normal activities without compromising long term results.



Figures 3 and 4: AP and lateral views of the spine at the 1-year postoperative visit