

PERCUTANEOUS SPINAL TRAUMA TREATMENT USING THE VIPER2 SYSTEM

Tony Tannoury, MD
Boston University, Department of Orthopaedics

History of Present Illness and Imaging

- A 48-year old male construction worker arrived at the ER after falling from a three story building
- The patient was neurologically intact but demonstrated signs of bilateral leg weakness
- Imaging revealed L1 and L2 burst fractures with a severely compromised canal at both levels (Figures 1, 2, & 3)



Figure 1: Lateral CT Scan

Treatment Method and Materials:

- An anterior corpectomy was performed at L1/ L2 and an 80mm mesh cage was inserted into the space left from T12 to L3
- A unilateral anterior EXPEDIUM rod and screw construct was inserted laterally from T12 to L3 to support the anterior column
- Nine percutaneous VIPER screws were placed bi-laterally at every level from T12 to L4 except in the left pedicle on L1
- Bilateral 120mm VIPER 2 rods were placed percutaneously starting from T12 (Figures 4 & 5) to L4
- OR time for the posterior portion of the case was approximately 75 minutes with 75cc of blood loss and no complications

Follow-up Results

- The patient was ambulating on post-operative day 3 and was discharged on day 4
- At the time of discharge, the patient reported almost no posterior muscle pain despite the 5-level instrumentation
- At 6 months post-op, the patient was back to normal function and had no signs of adjacent level degeneration or post-traumatic alignment issues
- The patient has no complaints of incisional or muscle pain and the skin incisions were observed to have healed completely at 6 months

The VIPER2 System's percutaneous posterior fixation allowed us to fully stabilize this patient's spine while contributing to little blood loss, minimal posterior muscle damage and a fast recovery.



Figure 2: Axial CT of L1



Figure 3: Axial CT of L2



Figure 4: Post-op Lateral Radiograph

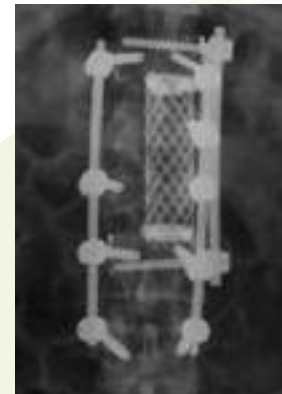


Figure 5: Post-op A-P Radiograph