

## Surgical Repair of Complex Dural Tear using Autologous Fascia Lata in a Patient with L1 Chance Fracture

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### INTRODUCTION:

Chance fracture with dural tear can cause neural entrapment in itself, and cerebrospinal fluid (CSF) leakage leading to meningitis and post-traumatic meningocele. However, determination of its existence by clinical and radiological methods prior to surgical treatment is difficult. We hereby describe an unusual case of a patient with L1 chance fracture complicated with complex dural tear intraoperative which required dural patching.

### REPORT:

The patient, who was 41 years old and had previously been able to carry out activities of daily living independently, experienced a motor vehicle accident while riding a motorcycle. The collision occurred when a car hit him from behind, causing him to fall onto his back. Physical examination revealed complete neurology deficit with neurological level at T12 (ASIA B). Plain radiographs and computed tomography showed an unstable L1 Chance fracture with subluxated T12/L1 facet joint.

After exposing the thoracolumbar spine using posterior approach, fracture stabilization with posterior instrumentation from T10-L3 was done. Posterior decompression via an L1 laminectomy was performed and upon exposing the dura mater, we observed an extensive dural tear with complex configuration. Under loupe magnification, the repairable edges were approximated using Prolene 6/0.

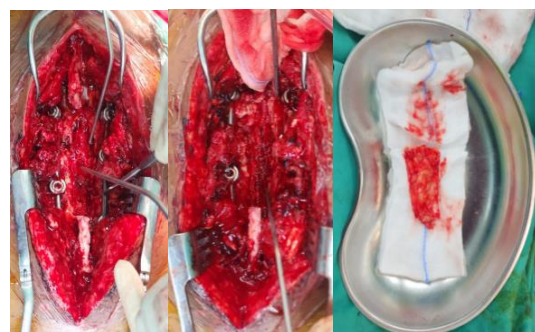
Fascia lata graft was harvested from left thigh. The graft was laid over the surrounding dura mater and secured to the margins using Prolene 6/0. The repair site was augmented with DuraSeal<sup>®</sup>. Valsalva maneuver was done and no CSF leak was demonstrated. Post-operatively, the drain was removed after 5 days. Wound

healing was uncomplicated and he was referred for intensive spinal rehabilitation. No signs & symptoms of dural leak were noted on subsequent follow-up.

**Figure 1: Plain radiographs (left: pre-operation and right: post-operation).**



**Figure 2: Intraoperative images depicting the complexity of dural tear (left), after repair with autologous fascia lata graft (centre) and fascia lata graft (right)**



### CONCLUSION:

Dural patching using autologous fascia lata graft augmented with DuraSeal<sup>®</sup> is a feasible technique to repair complex extensive dural tear with favourable surgical outcome.

### REFERENCES:

1. Ozturk C, et. al. Int Orthop. 2006;30:295–298.