

Anterior transthoracic approach

Anterior [transthoracic approaches](#), including thoracoscopic microdiscectomy (TMD), are the preferred techniques for central, broad-based, calcified thoracic disc herniations (TDHs). Dural defects due to manipulation or transdural extension may create a potentially life-threatening subarachnoid-pleural fistula. We evaluate a fast, sutureless technique for reconstructing the dura.

METHODS: We analyzed 476 anterior transthoracic approaches for TDHs (437 TMDs, 31 mini-thoracotomies, 7 transaxillary approaches, and 1 sternotomy). Dural defects were closed using an onlay dura substitute, fibrin glue, an autologous fat graft, and another layer of fibrin glue topped by an absorbable gelatin sponge. A chest tube was used to provide a water seal, and the use of external lumbar drains (ELDs) was discontinued in recent years.

RESULTS: We encountered 35 dural defects (7.35%), including 27 in 279 procedures (9.67%) in the first 10 years and 8 in 197 (4.06%) in the past 6 years. Five defects were large, 23 were relatively small, and 5 had an intact arachnoid layer, likely preventing cerebrospinal fluid (CSF) egress. Two CSF leaks in the early series were overlooked intraoperatively; 1 patient died following widespread cortical venous thrombosis, whereas the other merely had a headache that disappeared within 1 week. Overall, an ELD was inserted in 3 of 5 large defects and in 17 of 23 small defects; however, in the past 6 years, an ELD was inserted in no large defects and in only 1 of 5 small defects. The technique was successful in all but 1 patient, who underwent reoperation using a larger fat graft.

CONCLUSIONS: Dural defects encountered during anterior transthoracic approaches to TDHs can be reconstructed endoscopically, while avoiding the use of an ELD in most cases ¹⁾.

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Cornips EMJ. Multilayer Dura Reconstruction After Thoracoscopic Microdiscectomy: Technique and Results. World Neurosurg. 2018 Jan;109:e691-e698. doi: 10.1016/j.wneu.2017.10.056. Epub 2017 Oct 20. PubMed PMID: 29061456.

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