



Introduction

Incidental dural tear is one of the most common intraoperative complications in lumbar spine surgery. Yet, its technical management for the prevention of CSF leak is controversial.

Methods

To determine outcome according to CSF fistula in a selective cohort with intraoperative spinal dural tear after different repairs in a comparative study, 62 consecutive patients underwent spinal dural repair after microdiscectomy (n=42) or lumbar spinal decompression (n=20). Group 1 consisted of 20 patients, with Type I or mild dural tear who had tissue-glue coated collagen sponge or fibrin glue application application. Group 2 comprised 21 patients with Type II or moderate dural tear who had both tissue-glue coated collagen sponge and fibrin glue application. Group 3 comprised 21 patients with Type III or severe dural tear who had polypropylene suture and tissue-glue coated collagen sponge and/or fibrin glue application. Evident postoperative internal or external CSF leak was used to determine the patient’s postoperative result.

Results

Postoperative internal or external CSF leak was not evident during a minimum 1 year follow up in group 1. Internal CSF leak was evident in group 2 (n=3) and group 3 (n=3) during same follow up. No external CSF leak was disclosed. Three patients underwent re-do spinal surgery for CSF leak repair.

Conclusions

Patients in all groups prevented satisfactorily CSF leak. According to the intraoperative findings of a distinct dural tear, patients can be treated adequately with a specific surgical technique.

Learning Objectives

To disclose different types of dural tears of the spinal canal.
To decide what approach is best according to its type.

References

1.Camissa FP, Girardi FP, Sangani PK. Incidental durotomy in spine surgery. Spine 25(20):2663–2667, 2000

2.Desai A, Ball PA, Bekelis K, Lurie JD, Mirza SK, Tosteson TD, Weinstein JN. Outcomes after incidental durotomy during first-time lumbar discectomy. J Neurosurg Spine. 14(5):647-53, 2011

3.Deyo RA, Mirza SK, Martin BI, Kreuter W, Goodman DC, Jarvik JG (2011) Trends, major medical complications, and charges associated with surgery for lumbar spinal stenosis in older adults. JAMA 303(13):1259–1265, 2011

4.Gazzeri R, Galarza M, Fiore C, Callovini G, Alfieri A. Use of tissue-glue-coated collagen sponge (TachoSil) to repair minor cerebral dural venous sinus lacerations: technical note. Neurosurgery.11 Suppl 2:32-6; 2015

