Expert's comment concerning Grand Rounds case entitled “Intracranial hypotension with a sixth cranial nerve palsy subsequent to massive thoracic CSF hygroma: a rare complication of thoracic disc excision” (by A. Khurana, J. Brousil, A. Russo, A. Evans, N. A. Quraishi, B. M. Boszczyk doi:10.1007/s00586-013-2818-1)

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This is an interesting Grand Rounds article [1]. The authors clearly present two patients with thoracic disc ruptures who underwent transthoracic discectomy with intraoperative repair of dural rent. These two cases have similar complications, treatments and outcomes. Whereas incidental (unintended) durotomy and its management is well known in the lumbar surgery literature, management of this complication is less well established in other areas of the spine [2, 3]. Potential complications from uncontrolled cerebrospinal fluid (CSF) egress include, among

others, headache and cranial nerve (CN) disorders, presumed to be related to sagging of the brain and brainstem and traction on the dura [4]. Fortunately, these complications are usually reversible with correction of the CSF disorder. The source of CSF leakage can have congenital (spinal cord herniations), developmental (dural ectasia and spinal subarachnoid cysts), traumatic, iatrogenic, and other etiologies. Surgeons should strongly consider the possibility of CSF leakage if the development of new CN disorders appears in a patient who has undergone spinal surgery.

The optimal repair of dural rents is generally regarded as primary re-approximation of the dural edges. This is frequently impossible due to loss of dural material and surgical constraints. Dural grafting using autologous material (fascia lata, pericranium) or commercial dural substitutes is often required. These repairs are usually reinforced with topical sealants but this does not insure a satisfactory closure [5]. Muscle rotation or advancement flaps can be considered to further augment the closure [6]. Unfortunately, closure of the dural rent is not always successful due to pressure differentials between the intradural CSF and the extradural environments. One way to minimize the pressure differentials is to place a subarachnoid drain to maintain a low CSF pressure.

The authors are to be commended for their reporting of this complication and treatment of this difficult problem.

Conflict of interest None.

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