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Three-level thoracic disc herniation: case report and review of the literature (P. G. Korolessis et al., ESJ 1997, Vol. 6, p. 74–76)

Sir:

The authors present an unusual case of three-level thoracic disc herniation causing cord compression. There are, however, some important inconsistencies and misinterpretations that I would like to comment on.

First, I agree with the authors that MRI is currently the most effective screening test in the diagnosis of this disease. Its advantages include both axial and sagittal imaging, its noninvasive character, the absence of radiation, and the ability to perform the test in an outpatient setting. However, I strongly believe that MRI should be supplemented by myelography combined with CT to select the optimal surgical approach, if operative treatment is considered. As reported previously, CT myelography provides further detail of the bony anatomy and size of the extradural lesion [4]. Furthermore, it seems from review of the available MRI image that the most significant cord compression was at T8–9. It would be interesting to know whether or not a T8–9 disc removal has been sufficient to relieve the patient's symptoms, because multiple-level thoracic disc excision carries a high risk of producing cord ischemia. I am not convinced that the

cord is being compressed except at T8–9 and T9–10.

The preoperative investigation may be limited to MRI for multilevel thoracic disc herniations, but I think that selective spinal angiography is mandatory if a transthoracic approach is selected. The transthoracic approach can provide access to the intervertebral spaces from T2 to T12 [2, 5]. However, the transthoracic approach should be carried out from the "right" side, instead of "left" side, to avoid injury of the artery of Adamkiewicz. Besides this, the risk of overlooking a fragment of disc embedded within the dura may be greater with the transthoracic approach. Therefore, I prefer the transpedicular or posterolateral approach followed by laminectomy, in which excision of the ligamentum flavum is easy after the cord has been decompressed anteriorly, if canal stenosis is present in addition to the disc herniation.

Another point is that, regardless of the operative technique employed, operating on the wrong interspace is a common pitfall and can be avoided by proper identification of the interspace by means of roentgenograms. This is particularly important as many neurosurgeons or orthopedic surgeons with considerable experience in disc surgery had never seen a protruded disc in the thoracic region. After an extensive search of the previous literature, I found only 34 reported cases of multiple thoracic disc herniations.

Another technical point is the use of fusion, which may be valuable in decreasing later changes in alignment and the development of osteophytes, if a corpectomy is performed with this procedure. I agree with the authors that the use of a surgical microscope allows complete removal of the herniated disc while avoiding wide vertebrectomy. Contrary to the case report by Korolessis et al. [3], however, I think that fusion is not necessary following the standard transthoracic and other two approaches (transpedicular and posterolateral costotransversectomy), because the limited amount of bone resection does not affect the stability of the spine.

In addition, their claim that no previous case of three-level thoracic disc herniation has been reported is not true. From the institution where I was trained, Peker et al. [6] reported the first case of three-level thoracic disc herniation 8 years ago. Their patient was a 45-year-old man, and he had disc herniations at the T7–8, T8–9, and T9–10 levels. In 1991, Bernardi et al. [1] reported another case, in a 49-year-old woman, in which the T6–7, T7–8, and T12–L1 interspaces were involved.

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