Lumbar disc mimicking tumor

To The Editor: We read with great interest the article by Dr. el Barzouhi and colleagues (el Barzouhi A, Vleggeert-Lankamp CLAM, Lycklama à Nijeholt GJ, et al: Predictive value of MRI in decision making for disc surgery for sciatica. Clinical article. J Neurosurg Spine 19:678–687, December 2013). In a randomized controlled study, they found MRI to be of little value in predicting an eventual discectomy. The authors are to be commended for conducting the trial to provide this Level I evidence. However, we respectfully point out that there are a few scenarios in which MRI could be extremely helpful or necessary when the postponement of a lumbar discectomy is considered.

First, MRI is critical to rule out neurogenic tumors causing sciatica. Nevertheless, some disc herniation may also have enhancement of contrast media in MRI, which is typical for neoplasm. Also, there is occasionally enhanced disc herniation such that its morphology can mimic a schwannoma (Fig. 1). Second, MRI is useful for the evaluation of foraminal stenosis caused by a far-lateral disc herniation. Last, but not least, MRI can provide information about the neighboring facet joints, which could affect the strategy of intervention.

To date, there are still controversies in the management of lumbar disc herniation, including the timing and surgical approach. Since the current report focused on the index level of disc herniation, perhaps a post hoc analysis of the adjacent levels in the same clinical trial could also provide invaluable data.

Fig. 1. A: Preoperative MR image. There is a contrast-enhanced dumbbell-like lesion, which was abutting the left L4/5 neuroforamen. The radiologists read it as a nerve sheath tumor involving the root. B: Intraoperative microscopic photograph. This photograph clearly demonstrates the sequestrated disc, which was taken out with instruments. C: Postoperative MR image taken on Day 3. The image demonstrates reappearance of the root in a well-decompressed neuroforamen.
Complication avoidance in intradural extramedullary spinal tumors

To The Editor: We read with great interest the article by Mehta et al.1 in the Journal of Neurosurgery: Spine (Mehta AI, Adogwa O, Karikari IO, et al: Anatomical location dictating major surgical complications for intradural extramedullary spinal tumors: a 10-year single-institutional experience. Clinical article. J Neurosurg Spine 19:701–707, December 2013). The authors analyzed a series of 96 patients with intradural extramedullary (IDEM) tumors and concluded that postoperative neurological deficits occurred most frequently in cases with anteriorly located tumors between T-1 and T-8. Their article provides valuable insight by correlating tumor location with postoperative complications. However, we respectfully propose several other factors that could be considered by the authors.

The size of the tumor should be taken into consideration.2 Were tumors of variable sizes within the same location group associated with a similar rate of complications? In our practice, a patient recently presented with a tumor in T-2, and the lesion occupied almost all 3 categories proposed in the article (Fig. 1). Gross-total removal of the tumor was achieved from behind, via laminectomy and facetectomy, without neurological complications. Would the authors consider different surgical strategies according to the diameter of the tumor?

Moreover, the interface between the tumor and the spinal cord also affects outcome.2 Usually there is an arachnoid plane between the IDEM tumor and the spinal cord. However, sometimes the tumor can be strongly affixed to the spinal cord, and it is risky and almost impossible to dissect. For example, another patient of ours had a spinal tumor at a very similar anatomical location (Fig. 2). During the operation, the tumor-cord interface was so

Fig. 1. A: Preoperative sagittal T2-weighted MR image revealing a spinal tumor in the segment of T1–3. B: Preoperative axial T2-weighted MR image of the tumor occupying three-quarters of the spinal canal (a clock position from 12 to 9 o’clock). C: Postoperative sagittal section of the indicated level. D: Postoperative axial view of the indicated level, suggesting proper re-expansion of the spinal cord.

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2. Response: We would like to thank Dr. Kuo et al. for their interesting letter. The authors present 3 interesting scenarios in which MRI could be helpful. First, to rule out neurogenic tumors causing sciatica. Second, for the evaluation of foraminal stenosis caused by a far-lateral disc herniation. Third, MRI can provide information about the neighboring facet joints, which could affect the strategy of intervention.

The presented scenarios are not inconsistent with our conclusions. Our study showed that MRI findings were not predictive for future lumbar disc surgery in patients who suffered from 6–12 weeks of sciatica. We therefore concluded that the role of MRI remains limited to depict the anatomical features and the level of a herniated disc, necessary for the surgical technical approach, and should not be used as a prognosis tool in the shared decision-making discussion for surgery versus wait-and-see. We did not question whether or not MRI should be performed or the optimal timing of MRI in sciatica.

Current guidelines recommend performing MRI after 6 to 12 weeks of sciatica. Magnetic resonance imaging provides information about the cause of sciatica (scenario 1) and what surgical approach is most appropriate (scenarios 2 and 3). However, as our study suggests that MRI is not predictive for future lumbar disc surgery, one should be cautious to base the decision for lumbar disc surgery on MRI findings. In fact, clinical variables, such as the severity of disability and leg pain, proved to be of more discriminatory value.

When assessing the disc levels at adjacent levels (levels outside the index level of disc herniation), we observed that the percentage of impaired discs at these levels was 80% in those who did and 72% in those who did not undergo disc surgery (p = 0.49).

Future studies are needed to assess the optimal timing of performing MRI in the evaluation of patients with sciatica. The optimal timing for lumbar disc surgery also remains to be established.

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