Letters to the Editor

NEUROSURGICAL FORUM

Posterior epidural migration of lumbar intervertebral disc fragment

TO THE EDITOR: We have read with interest the paper by Sengoz et al.¹⁴ (Sengoz A, Kotil K, Tasdemiroglu E: Posterior epidural migration of herniated lumbar disc fragment. *J Neurosurg Spine* 14:313–317, March 2011), in which the authors report on 8 patients who presented with cauda equina syndrome attributed to posterior epidural migration of a free disc fragment, and we wish to congratulate our colleagues on this contribution to the literature on lumbar disc herniation. The authors have discussed their cases nicely. Nevertheless, we think several aspects of this article deserve further comment and clarification.

Posterior epidural migration of a free lumbar intervertebral disc fragment (PEMLIF) is defined as a free disc fragment completely migrated into the posterior epidural space. But Figs. 1 and 3 demonstrated a lumbar disc herniation lodged laterally and extended through the right intervertebral foramen as reported by Saruhashi et al.¹² in 1999 (unfortunately, Fig. 1 is out of focus).¹⁴ In addition, Fig. 2 did not show a PEMLIF with certainty.

Surprisingly, the authors reported the same case series of 8 patients with PEMLIF which had also been published (in whole) in another medical journal in 2010 as a duplicative publication,¹⁵ titled “Surgical treatment of posterior epidural migration of herniated lumbar disc fragment: a clinical series.”

In the introduction, Sengoz et al.¹⁴ mentioned that “The first case of disc hernia with posterior epidural migration was reported by Lichtor in 1989,” but early in 1973, Lombardi (an Italian neurosurgeon) had reported 2 cases (already) of posterior epidural migration of lumbar disc herniation.⁹

As mentioned by the authors, this entity is extremely rare and the exact mechanism for PEMLIF is not yet clear. In the article, excluding the 8 new cases presented, the authors claim that only 23 cases with PEMLIF have been published in the literature. In addition to the first 2 cases reported by Lombardi in 1973,⁹ Hirabayashi et al. also reported a case in 1990,³ and then Hodges et al.⁴ and Neugroschl et al.¹¹ documented 3 new cases. Afterward, in 2003 and 2004, Kim et al.,⁸ Şenel et al.,¹³ Kim et al.,⁶ and Walsh et al.¹⁷ added 1 case each. In 2009, Derincek et al.² and Carvi y Nievas et al.¹ reported 1 and 5 cases, respectively. More recently, Teufack et al.¹⁶ and Kim et al.⁷ added 1 case each.

Recently, we carefully reviewed posterior epidural migration of lumbar disc herniation and found a further 17 detailed reports in the world English literature,^{1–4,6–9,11,13,16,17} in addition to those cited by Sengoz et al.¹⁴ (except for Saruhashi et al.’s case¹²). Thus, the total number of cases with PEMLIF was 41, not 23, although the papers reported in 2010 by Teufack et al.¹⁶ and Kim et al.⁷ could not be included in the authors’ literature review.

Besides the lumbar spine, only 1 case of posterior sequestered disc fragment has been reported in the cervical region and 5 cases in the thoracic spine.^{5,10}

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DISCLOSURE

The authors report no conflict of interest.

References

1. Carvi y Nievas MN, Hoellerhage HG: Unusual sequestered disc fragments simulating spinal tumors and other space-occupying lesions. Clinical article. *J Neurosurg Spine* 11:42–48, 2009
2. Derincek A, Ozalay M, Sen O, Pourbagher A: Posterior epidural mass: can a posteriorly migrated lumbar disc fragment mimic tumour, haematoma or abscess? *Acta Orthop Belg* 75:423–427, 2009
3. Hirabayashi S, Kumano K, Tsuiki T, Eguchi M, Ikeda S: A dorsally displaced free fragment of lumbar disc herniation and its interesting histologic findings. A case report. *Spine (Phila Pa 1976)* 15:1231–1233, 1990
4. Hodges SD, Humphreys SC, Eck JC, Covington LA: Posterior extradural lumbar disk fragment. *J South Orthop Assoc* 8:222–228, 1999
5. Kim IS, Lee SW, Son BC, Sung JH: Posterior epidural migration of thoracic disc fragment. *J Korean Neurosurg Soc* 43:239–241, 2008
6. Kim JH, Kong MH, Lee SK, Song KY: A case of posterior epidural migration of an extruded lumbar disc fragment causing cauda equina syndrome. *J Korean Neurosurg Soc* 35:442–444, 2004
7. Kim JS, Lee SH, Arbatti NJ: Dorsal extradural lumbar disc herniation causing cauda equina syndrome: a case report and review of literature. *J Korean Neurosurg Soc* 47:217–220, 2010
8. Kim MS, Hur JW, Lee JW, Lee HK: Posterior and lateral epidural migration of extruded lumbar disc fragments: case report. *J Korean Neurosurg Soc* 33:297–298, 2003
9. Lombardi V: Lumbar spinal block by posterior rotation of

- annulus fibrosis. Case report. **J Neurosurg** 39:642–647, 1973
10. Manabe S, Tateishi A: Epidural migration of extruded cervical disk and its surgical treatment. **Spine (Phila Pa 1976)** 11:873–878, 1986
 11. Neugroschl C, Kehrli P, Gigaudo M, Ragragui O, Maitrot D, Manelfe C, et al: Posterior extradural migration of extruded thoracic and lumbar disc fragments: role of MRI. **Neuroradiology** 41:630–635, 1999
 12. Saruhashi Y, Omura K, Miyamoto K, Katsuura A, Hukuda S: A migrated lumbar disk herniation simulating a dumbbell tumor. **J Spinal Disord** 12:307–309, 1999
 13. Şenel A, Çokluk C, Çelik F: Posterior epidural migration of extruded lumbar disc mimicking epidural mass: case report. **Türk Neurosurg** 13:115–117, 2003
 14. Sengoz A, Kotil K, Tasdemiroglu E: Posterior epidural migration of herniated lumbar disc fragment. **J Neurosurg Spine** 14:313–317, 2011
 15. Şengöz A, Kotil K, Taşdemiroğlu E: Surgical treatment of posterior epidural migration of herniated lumbar disc fragment: a clinical series. **İstanbul Tıp Dergisi** 2:65–68, 2010
 16. Teufack SG, Singh H, Harrop J, Ratliff J: Dorsal epidural intervertebral disk herniation with atypical radiographic findings: case report and literature review. **J Spinal Cord Med** 33:268–271, 2010
 17. Walsh AJ, Martin Z, McCormack D: Cauda equina syndrome secondary to posterior epidural migration of a lumbar disc fragment: a rare phenomenon. **Eur J Orthop Surg Traumatol** 14:30–31, 2004

Response

First of all, we would like to thank the authors for their meticulous comments, contributions, and their appreciation of the care we have taken in the presentation of the cases. We would like to clarify the aspects of our article that may need further comment, as our colleagues have remarked.

It is claimed that Figs. 1, 2, and 3 do not fully express posterior migration, but we all know that the definite diagnosis of discs showing posterior migration can most often be reached at surgery, and that radiological images may be misleading in many cases. This was clearly depicted in the *Discussion* section of our article, with supporting references (4th paragraph of the *Discussion*). The cases that we have presented are discs showing posterior migration. The radiological presentation of discs with posterior migration, such as anular contrast enhancement and other characteristics, were also pointed out in our paper. Even now, high-resolution MR imaging may not fully visualize posterior migration. Also, we have presented our literature search results, underlining the similarities and differences between our cases and others.

For the second aspect, which was defined as “duplicative publication” by the authors, we would like to remind them that the other “medical journal” mentioned was the medical bulletin of the hospital where we work. It is expressed under the heading of “Aim and Scope” (<http://www.istanbulmedicaljournal.org/tr/sayfalar/8/Ama%C3%A7-ve-Kapsam>) that this publication is the official journal of our hospital. It is expressed as follows: “İstanbul Medical Journal is the scientific official journal of İstanbul Education and Research Hospital.” In this bulletin belonging to our institution, our cases were evalu-

ated in 2010 in terms of the surgical treatments that they had received, as a technical note about the surgical procedures. In time, this publication was changed to become an international medical journal searched by other indices, which brought our preliminary report for in-service education to the attention of Akhaddar et al., creating the false impression of a duplication. If the total number of reported cases (23 as of the time that we were preparing our manuscript, which is very few) is considered, discussion of various characteristics of such rare cases in different medical communities does not represent duplication.

The different characteristics of the two articles may be easily seen when they are compared. The hospital bulletin reflects a preliminary study, with only the approach to such patients, surgical treatment, and effects of the timing of surgery on the cases being discussed. The tables, figures, and presented illustrative cases are totally different. The discussion is also different, evaluating this entity from different angles. Long-term results (about 30 months) were presented in *Journal of Neurosurgery: Spine*. For these reasons, we would like to express again that a definition of “duplication” is not correct.

We would like to clarify another of the aspects, which may have escaped the notice of our colleagues. Although they claim that the first case was reported by Lombardi, and that we had omitted to relate this fact in our paper, this is not correct. The 3rd sentence of our *Discussion* section is “Lombardi defined the first case of PEM of sequestered disc fragment in 1973.” Also, Lombardi is cited as the 9th reference in our article.

We thank our colleagues for reporting the increased number of cases in recent years, and also for their study and contribution to the literature. As is well known, no author can claim to have accessed all the published reports globally. We consider the additions of our colleagues to be another contribution, rather than a criticism.

As a last word, we could in turn remind our colleagues that they have omitted to add our cases in their discussion and our article among the references in their review,¹ but we do not, because it is obviously a result of the very close dates of publication of the two reports, reflecting the impossibility of reaching all medical sources while preparing a medical manuscript.

We again thank the authors for their comments and contributions.

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Reference

1. Akhaddar A, El-Asri A, Boucetta M: Posterior epidural migration of a lumbar disc fragment: a series of 6 cases. **J Neurosurg Spine** 15:117–128, 2011

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