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Case Report

Posterior Epidural Migration of Lumbar Disc Fragment: Case Report

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Abstract

Even though it is commonly observed that fragments of lumbar disc can migrate towards superior, inferior, lateral intradural, and interdural distance, it is solely seen that they migrate towards the posterior part. Clinical outcomes of the posterior epidural migration are similar to lumber disc hernia outcomes. Abscess can be confused with posterior space-occupying lesions. Despite severe neurologic deficits, surgical outcomes are promising in cases reported in the literature. Furthermore, these promising surgical outcomes increase the importance of the rapid diagnosis and treatment. In this case study, we discussed the posterior epidural migration of the disc fragment which led to radiculopathy at the L4-5 level in a 40-year-old male patient.

Keywords: *Posterior Epidural Migration; Sequestered Disc; Laminectomy*

Introduction

The posterior epidural migration (PEM) was defined for the first time by Lombardi in 1973 [7]. Even though it is commonly observed that fragments of lumbar disc can migrate towards superior, inferior, lateral intradural, and interdural distance, it is solely seen that they migrate towards the posterior part [1]. The clinical outcomes are similar to the outcomes of lumbar disc hernia [1,4]. Magnetic Resonance Imaging (MRI) findings facilitate the diagnosis before the operation whereas precise diagnosis is not established by imaging techniques [4]. Abscess can be confused with posterior space-occupying lesions. In this study, we evaluated and reported the patient who was admitted to the hospital with the disc hernia, who had a lesion that was similar to an abscess or a lump according to the lumbar MRI findings, and who had an epidural sequestered disc after the operation.

Case Report

The 40-year-old male patient was admitted to the hospital with the complaint of pain in his left leg. The patient felt the pain for a long time and its severity increased in the last 1 month. The patient did not have any trauma background. The patient and his family did not have a history of any significant disease. The patient did not benefit from medical treatment and rest. According to the examination of the patient, there was a L4-L5-S1 hypoesthesia and the Laseque's test was 30 degrees positive. According to the results of the lumbar MRI that was performed with contrast agent, there was an epidural lump that was surrounded by the contrast agent according to the lumbar MRI findings and this lump applied compression on the left dural sac from the left posterolateral. There was a significant compression on the left L4 root (Figure 1 and 2). Then, the total laminectomy was performed with the patient. The epidural sequestered disc, which applied compression on the left L4 root, was removed. The symptoms of the patient were completely resolved after the operation.

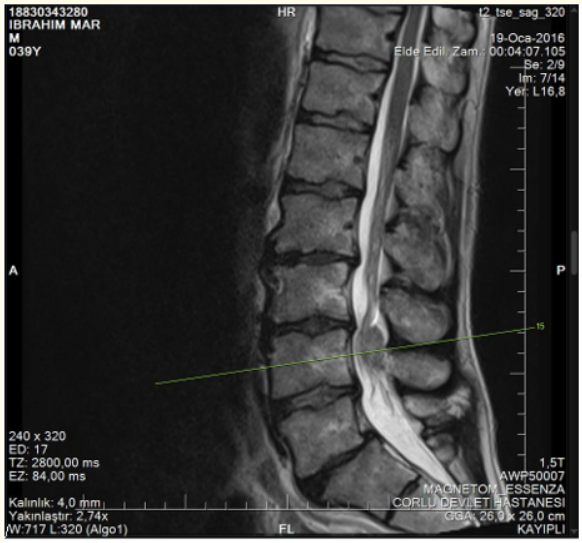

Figure 1

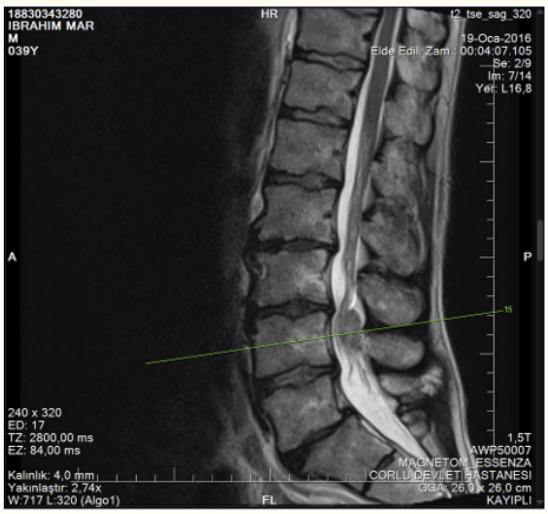

Figure 2

Discussion

It has been reported in studies that the incidence of the sequestered disc in all of the lumbar disc diseases is 28.6% [5]. Even though PEM lumbar disc hernias are rarely seen, there are case reports in the literature [1]. The pathophysiology of the PEM is not clearly explained but there are some theories on this topic. It has been specified by some of the authors that some anatomic structures such as sagittal midline septum and lateral membrane prevent the migration of the disc toward the posterior part. Except these structures, the disc should pass the epidural fat, epidural venous plexus, and the nerve root. Any abnormality in these anatomic structures facilitates the migration of the disc towards the posterior part [8]. The clinical outcomes of the PEM lumbar disc hernias are not different from the clinical outcomes

of other lumbar disc hernias. Acute and chronic lower back pain and radiculopathy can be observed in patients. Furthermore, cauda equina is the most commonly observed syndrome in these patients [3]. In our case, the complaint was radiculopathy. The gold standard is MRI in case of the lumbar disc hernia (LDH). According to MRI findings, free disc fragment can lead to T1-weighted isohypointense lesions. Furthermore, T2-weighted hyperintense lesions are generally observed whereas these lesions can also be seen together with hypointense lesions [2]. MRI findings of our patient were in line with the findings of the literature. PEM lumbar disc fragments can be confused with other lesions located in the epidural part such as tumors, hematoma, abscess, or synovial cyst [6]. The treatment of the PEM lumbar disc fragments can be planned according to the severity and the course of the symptoms. According to the literature, the conservative treatment was applied to only 3 of the 61 cases. Laminectomy and disc excision interventions were applied to other patients [8]. The symptoms of the patient were completely resolved after the total laminectomy operation. PEM lumbar disc hernias are rarely observed hernias and their clinical outcomes are not different from the LDH. However, patients who have PEM lumbar disc hernias are admitted to the hospital mostly because of the cauda equina syndrome. These lesions require surgical intervention. It should be considered that MRI imaging of these lesions can be confused with other types of lesions such as tumors, abscess, and hematoma.

Conclusion

As a conclusion lumbar disc hernias are rarely seen. The pathophysiology of the PEM is not clearly explained and require surgical intervention.

Informed Consent

The patient/next of kin/guardian has consented to submission of this case report to the journal.

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