

Spontaneously disappearing large herniated lumbar disc fragment

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ABSTRACT

There are reports of spontaneous regression of large extruded disc; however, the exact underlying mechanism and management of such cases remains controversial. We report a 40-year-old female who opted for conservative management for a large extruded lumbar disc. Follow-up magnetic resonance imaging (MRI) showed complete disappearance of the disc fragment; however, there were degenerative changes in the upper and lower adjacent margins of the vertebral body. Spine surgeons should be aware of spontaneous regression of the disc phenomenon as a patient with a large extruded disc who opted for the conservative management initially can have persistence pain, but there may not be an underlying protruded disc.

Keywords: *Disappearing disc, herniation, lumbar disc, regression disc, spontaneous regression*

Introduction

Herniated lumbar disc is one of the common causes of low back pain and smaller disc herniations tend to regress over a period of time; and thus, the pain is known to improve with conservative management.^[1-5] There are reports of spontaneous regression of large extruded disc; however, the exact underlying mechanism and management of such cases remains controversial.^[4-19]

Case Report

A 40-year-old female presented with low back pain of 2 year duration. The pain was radiating to lower limbs more to the left side. There was no history of motor or sensory deficits. There was no history of bowel or bladder dysfunction. She was investigated for the similar problem with an MRI 6 months back and it showed a large disc protrusion [Figure 1]. However, she

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	DOI: 10.4103/2319-2585.134208

opted for conservative management. On examination, there were no focal motor or sensory deficits. Deep tendon reflexes were normal except bilateral sluggish ankle jerks. Planters were flexor. As the patient was complaining in the severity of the pain with numbness and a repeat magnetic resonance imaging (MRI) was performed. Follow-up MRI showed complete disappearance of the disc fragment; however, there were degenerative changes in the upper and lower adjacent margins of the vertebral body [Figure 2].

Discussion

Spontaneous regression of herniated disc material was first documented in 1984;^[20,21] and since then, many authors have reported reduction in the size of herniated disc material on follow-up images with conservative treatment.^[4,11-13,21-24] The exact timing for spontaneous regression of the protruded disc material is not known; however, it ranges from few weeks to months.^[5,10,11,17,21,22,25-27] The fastest regression of the fragmented disc material was reported in 2 months.^[8] Many hypotheses have been proposed to explain the regression of the disc material including retraction of the herniated disc material, dehydration of herniated disc material, and inflammatory reaction and neovascularization.^[10,18,20,28,29] Inflammatory reaction and neovascularization is the widely accepted hypothesis where the extruded disc material is recognized as a foreign body inducing an inflammatory reaction and followed by removal of the disc material.^[10,20,28-37]

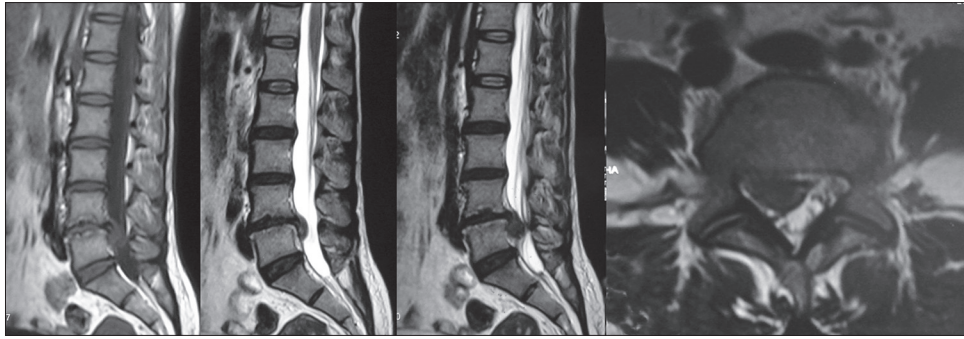


Figure 1: Magnetic resonance imaging T1-weighted and T2W sagittal images and fluid-attenuated inversion recovery axial image showing a large extruded disc at L4-5 level more on the right side with compression of the thecal sac



Figure 2: Follow-up MRI T2W sagittal images at 6 months showing complete disappearance of the extruded disc with Modic changes in the lower end plate of L4 and upper end plate of L5 vertebral body

Conclusion

Present case illustrates that a conservative approach can be adopted for a large extruded lumbar disc as it can resolve in a selective group of patients.^[24,38,39] Spine surgeons should be aware of spontaneous regression of the disc phenomenon as a patient with a large extruded disc who opted for the conservative management initially can have persistence pain, but there may not be an underlying protruded disc. It is important to perform a repeat imaging of the spine to assess the degree and severity of the disc protrusion before making a plan for surgery or any further conservative management.

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How to cite this article: Reddy UV, Agrawal A, Hegde KV, Suneetha P, Rao MG. Spontaneously disappearing large herniated lumbar disc fragment. *J Orthop Allied Sci* 2014;2:26-8.

Source of Support: Nil, Conflict of Interest: None declared.

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