Treatment Strategies in Late Recurrent Giant Lumbar Disc Hernia: Two Case Reports

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Abstract

For recurrent disc hernia, the aim is to eliminate factors, which lead to pain, achieve decompression with injuring underlying neural tissue, and to stabilize the site, if instability is observed, and finally, to early mobilize the patient.

For cases with recurrent disc hernia, patients can tolerate the condition, since enlargement of disc hernia is slow. Total laminectomy and bilateral discectomy will ensure neurological deficit-free postoperative course, if recurrent disc hernia is located at central zone and the size is giant. Moreover, one should carefully avoid tear of dura, when fibrotic tissue is debrided and giant disc hernia is excised.

Keywords: Recurrence; Lumbar disc hernia; Magnetic resonance imaging; Fibrosis

Introduction

Lumbar disc hernia (LDH) implies annulus fibrosus torn by lumbar intervertebral disc, resulting with bulge of nucleus pulposus into spinal canal and compression of cauda fibers and radixes. Recurrent lumbar disc hernia implies recurrence of disc hernia at same level, after patient has no complaint of pain for minimum 6 months, after patient undergoes discectomy [1]. Incidence of recurrent LDH is varying among different studies, and the incidence ranges from 2% to 18% in the literature; recurrence rate is 7-16% for patients, who had surgical treatment >2 years ago [2,3].

For recurrent disc hernia, the aim is to decompress the neural tissue, which is compressed, eliminate factors, which lead to pain, and to mobilize patient within possible shortest time. For cases with recurrent disc hernia, disc should be excised with total laminectomy, depending on size of hernia at level of recurrence, before instability and tear of dura occur at level of surgery. In this study, we explained the way to manage giant recurrent disc hernia, which is found on contrast-enhanced MRI of lumbar spine that is scanned since recent-onset complaints are specified by patients, who were operated on for disc hernia at level L4-5 5 years ago and at level right L5-S1 9 years ago, respectively, and the study also explains proper surgical approach for such cases.

Case 1

Right leg pain and neurogenic claudication are specified by a 61-year old male patient with a weight of 80 kg and height of 1.75 m, who underwent L4-5 left hemipartial laminectomy and discectomy 5 years ago and had no complaint in postoperative course. A substantially large recurrent disc hernia is found at level L4-5 on contrast-enhanced MRI of lumbar spine (Figure 1A and 1B). L4 total laminectomy, bilateral discectomy and fibrosectomy were carried out for the patient. Meanwhile, a small tear of dura occurred. Tear was primarily sutured. No neurological deficit is noted in postoperative course, and all complaints disappeared. Patient is mobilized with corset.

Case 2

A 55-year old man with a weight of 85 kg and height of 1.75 m who has undergone right L5 hemipartial laminectomy and discectomy for L5-S1 right discopathy 9 years ago, has no serious complaint thereafter. Recently, right leg pain and neurogenic claudication developed, as specified by the patient, and surgery is planned for the patient, after a giant central recurrent L5-S1 disc hernia (Figure 1C and 1D) is found on contrast-enhanced MRI of Lumbar Spine. L5 total laminectomy, bilateral discectomy and fibrosectomy were carried out, and a small tear of dura occurred. Tear was primarily sutured. All complaints disappeared in postoperative course, and no neurological deficit is observed.
Surgical treatment of cases with recurrent disc hernia is debated, including but not limited to hemipartial laminectomy + re-discectomy + fibrosectomy, total laminectomy + re-discectomy + fibrosection, total laminectomy + re-discectomy + fibrosectomy + stabilization with fusion [9]. Fusion can be considered for recurrent disc hernia, if instability, deformity or axial pain is noted [10]. Functional lumbar X-ray films should be obtained to determine whether there is instability, before surgery is considered for cases with recurrent disc hernia. Unnecessary stabilization will be obtained, if it is verified that there is no instability. Moreover, total laminectomy and bilateral discectomy should be carried out, if recurrent disc hernia causes central compression, if there is hard disc or if size of hernia is giant, similar to our cases. Surgeon should be extremely careful to avoid dura injury, while recurrent disc hernia is excised and fibrosis is extirpated. Some surgeons claim that excision of disc alone will be sufficient and fibrotic tissue should be extirpated without causing dural injury, and that it is not proper to excise fibrotic tissue completely [11].

**Conclusion**

In current study, we make efforts to emphasize that for cases with giant recurrent disc hernia, total laminectomy should be carried out and disc should be bilaterally emptied in order to avoid injury of neural structures, while the defect is decompressed. Moreover, functional X-rays should be preoperatively scanned to avoid unnecessary stabilization, and surgeon should be very careful to cause dura defect or instability, while laminctomy is performed and fibrotic tissue is excised.

**References**