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CASE REPORT / ПРИКАЗ БОЛЕСНИКА

Spontaneous regression of cervical disc herniation in a patient with myelopathy

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SUMMARY

Introduction The aim of this work was to present a rare case of spontaneous regression of a herniated cervical disc in a patient with myelopathy.

Case outline A 31-year-old women presented with two weeks' history of neck pain associated with numbness in her body and all four extremities. Magnetic resonance imaging (MRI) of the cervical spine showed a large posterior medial disc extrusion at the C5–C6 spinal segment, causing myelopathy. The patient refused discectomy that was recommended. She received symptomatic treatment in the form of analgesics, a muscle relaxant, and a hard cervical collar. A follow-up MRI of the cervical spine, performed after 11 months, revealed almost complete regression of disc herniation. The patient's symptoms subsided completely after one year.

Conclusion In some cases of cervical disc herniation with myelopathy, especially in patients with mild neurological deficit, symptomatic therapy should be considered.

Keywords: cervical disc; herniation; regression; myelopathy

INTRODUCTION

Spontaneus regression of disc herniation without any surgical treatment has been reported to occur in the cervical region. Most such cases are confined to disc herniation that are associated with radiculopathy [1–7]. We present a very rare case of spontaneous regression of cervical disc herniation in a patient with myelopathy, demonstrated by magnetic resonance imaging (MRI).

CASE REPORT

A 31-year-old women, with unremarkable past medical history, presented with two weeks' history of neck pain associated with numbness in her body and all four extremities. Neurological examination showed C7 hypoesthesia level, without motor deficit. The MRI of the cervical spine showed a large posterior medial disc herniation (extrusion) at the C5–C6 level with increased signal intensities of compressed spinal cord. Other intervertebral disc spaces were normal (Figure 1). We recommended that she undergo anterior discectomy. The patient refused surgical treatment. She received symptomatic treatment in the form of analgesics, a muscle relaxant, and a hard cervical collar. The patient reported significant improvement in her symptoms after two months. A follow-up MRI of the cervical spine, performed after 11 months, revealed almost complete regression of the disc herniation and the resolution of the increased cord signal at the C5–C6 level (Figure 2). The patient's symptoms subsided completely after one year.

DISCUSSION

Song et al. [8] first reported a case of spontaneous regression of a herniated disc in a patient

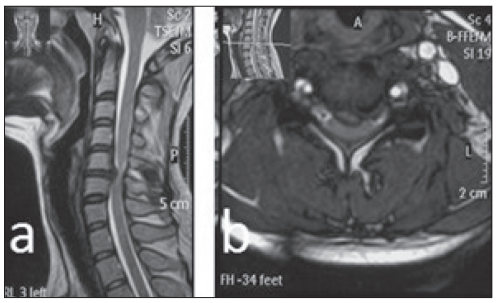

Figure 1. Initial sagittal (a) ant axial (b) T2-weighted MRI of the cervical spine revealed large disc herniation with increased signal intensities of the spinal cord at the C5–C6 level

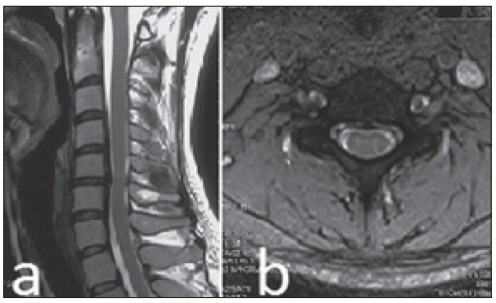

Figure 2. A follow-up sagittal (a) ant axial (b) T2-weighted MRI of the cervical spine revealed almost complete regression of the herniated cervical disc and the resolution of the increased cord signal at the C5–C6 level

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with myelopathy. They reported a case of a 37-year-old women who developed sudden C7 sensory level quadriparesis (motor grade 4+) caused by C5–C6 disc herniation and subsequent myelopathy, seen on an MRI of the cervical spine. The patient refused cervical discectomy, which was recommended. A follow-up MRI, performed after 28 months, showed complete regression of disc herniation and the abnormal cord signal. The patient's symptoms subsided almost totally.

We surveyed the literature and identified only one more reported case on this subject. Stavrinou et al. [9] reported a 46-year-old women with three weeks' history of neck pain and right brachialagia, associated with hand numbness and mild grasping weakness. An MRI of the cervical spine showed C5–C6 disc herniation causing myelopathy. The patient was offered surgery, which she denied. Within seven weeks, the patient had significant clinical improvement. A subsequent MRI showed almost complete regression of disc herniation and myelopathy.

To our knowledge, the patient from our report is the third MRI-documented case of spontaneous regression of cervical disc herniation in a patient with myelopathy.

The exact mechanism of spontaneous regression of a herniated disc is still unclear. Regression of a herniated disc detected on MRI might represent in part dehydration of the herniated nucleus pulposus. Histological studies have shown evidence of an inflammatory reaction in the herniated disc material, subsequent angiogenesis, and macrophage infiltration that play the essential role in phagocytosis and regression of the herniated disc [10, 11].

Some authors have suggested that some characteristics of a herniated disc determine its likelihood to regress spontaneously. Spontaneous regression of sequestration was seen more frequently when compared to protruding herniation. Also, a large-sized disc herniation has been reported to regress more than a smaller one [7].

As a rule, surgical therapy of cervical disc herniation associated with myelopathy is strongly recommended. Morbidity and mortality are low in this surgical procedure, with good outcome. It would be inappropriate to give some general treatment guidelines from the results in a single patient from this report and from previously reported two patients. However, the knowledge of a possibility of spontaneous regression of a herniated disc is important in considering treatment options, especially in patients with mild neurological deficit. In some cases of cervical disc herniation with myelopathy, nonsurgical symptomatic therapy should be considered as a treatment option.

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Спонтана регресија цервикалне дискус херније код болесника са мијелопатијом

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САЖЕТАК

Увод Циљ овог рада је био да прикаже редак случај спонтане регресије цервикалне дискус херније код болеснице са мијелопатијом.

Приказ болесника Тридесетједногодишња жена се јавила на преглед због болова у врату и трњења у телу и у сва четири екстремитета, које траје две недеље. МР вратне кичме је показала изражену медијалну екструзију дискуса на нивоу *C5–C6*, која је довела до мијелопатије. Болесница је одбила предложену дисцектомију. Спроведено је симптоматско лечење (аналгетици, мишићни релаксанти и тврди оковратник). Контролна МР вратне кичме после 11 месеци показала је скоро комплетну регресију дискалне херније. Симптоми су се потпуно повукли после годину дана.

Закључак У појединим случајевима цервикалне дискус херније са мијелопатијом, нарочито код болесника са благим неуролошким дефицитом, треба размотрити могућност симптоматске терапије.

Кључне речи: цервикални дискус; хернијација; регресија; мијелопатија