

Rapid Spontaneous Regression of Lumbar Disc Herniation Accompanying Neurological Recovery: Case Report

Lomber Disk Herniasyonunun Nörolojik Düzelmeye Eşlik Eden Hızlı Spontan Regresyonu: Vaka Sunumu

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ABSTRACT

Spontaneous regression of herniated lumbar disc is well known entity. Therefore effective treatment of symptomatic patients is still controversial. Patients complaining leg pain and with neurological deficits and diagnosed as extruded lumbar disc, may benefit from surgery. But well considered conservative treatment resulted as regression may also be an alternative. In the literature there is no clear information about the time of regression. In this article authors aimed to point the rapid regression of herniated lumbar disc. According to the literature, the presented case has the fastest regressed clinicopathologic condition of lumbar disc herniation. (*JPMR Sci 2012;15: 89-91*)

Keywords: Lumbar disc herniation, spontaneous regression, neurological deficit

ÖZET

Lomber disk herniasyonunun spontan regresyonu tanımlanmış bir klinik durumdur. Bu nedenle lomber disk herniasyonunda semptomatik hastaların tedavisi hala tartışmalıdır. Bacak ağrısı tanımlayan nörolojik defisiti olan ekstrüde disk hernisi olan hastalar cerrahiden fayda görebilirler. Fakat iyi düzenlenmiş bir fizik tedavi de alternatif tedavi seçeneği olabilmektedir. Literatürde regresyon zamanı ile ilgili net bir bilgi bulunamamaktadır. Bu makalede yazarlar ekstrüde lomber disk'in nörolojik düzelmeye eşlik eden hızlı regresyonunu göstermeyi amaçlamışlardır. Makale nörolojik ve radyolojik olarak en hızlı düzelen olguyu sunması nedeniyle önemlidir. (*FTR Bil Der 2012;15: 89-91*)

Anahtar kelimeler: Lomber disk herniasyonu, spontan regresyon, nörolojik defisit, rehabilitasyon

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Introduction

Lomber disc herniation of the lumbar spine is a common disease presenting low back pain and involving nerve root radiculopathy. It has been reported that protruded disc can be found in 20-30 % of the normal population. There are two specific origins of disc disease that should be kept in mind:

Degenerative and traumatic. Regression of herniated lumbar disc is a well known condition but its mechanism is still unclear.

First documentation of spontaneous intervertebral disc regression by Guinto in 1983 (1).

In this article we are presenting a case that showed rapid radiological regression and improvement of neurological deficits in 14 days.

Case Report

A 32 year old man admitted to our outpatient clinic with one-week history of low back pain referred to left leg, neurological examination was revealed as neurological deficit with left ankle dorsal flexion (3/5). Achilles tendon reflex was absent and left straight leg raising (SLR) test was positive on 30 degrees. The initial MRI study showed L5-S1 sequestered disc fragment on the left side narrowing neural foramen. We proposed lumbar microdiscectomy but the patient refused surgery and preferred conservative therapy as *bed rest and injectable medications of non-steroid anti-inflammatory drugs-myorelaxants for 10 days (diclofenac sodium 75 mg 2x1 IM , thiocolchicoside 4mg. 2x1 IM)*. After that, on 10th, day his back and leg pain was completely relieved and surprisingly his ankle flexion was improved to 4/5. The second MRI study, 14 days after the initial one, revealed that sequestered fragment was disappeared completely. Only L5-S1 a left sided posterolateral disc protrusion was persisted. On follow up, one year after the second MRI study, he had no complaints and his neurological examination was normal. On third MRI study, previously L5-S1 left sided disc protrusion had disappeared completely and there was no evidence of dural sac compression (Figure 1).

Discussion

The literature including several reports of the spontaneous regression of lumbar fragmented disc but mechanism of is still unclear. Three hypotheses are attracting the attention. The first hypothesis, "retraction of a herniated disc", the second one is, "dehydration of herniated disc", the last one is, "inflammatory reaction and neovascularization", which is the most compelling and studied hypothesis, states that extruded disc material into the epidural vascular space of spine is recognized as a "foreign body" and induces an inflammatory reaction by the autoimmune system (1,2,3,4).

The first documented spontaneous lumbar disc regression is first described in 1983 by Guinto (4). After the two years, Teplick and Hankin documented spontaneous regression and they documented the condition by computerized tomography. They examined 55 patients with lumbar discopathy and 9 of patients regression was documented (5). Bozzao et al. prospectively analyzed the reduction by MRI, and reported that 63% of their patients showed a volumetric decrease in disc protrusion (6).

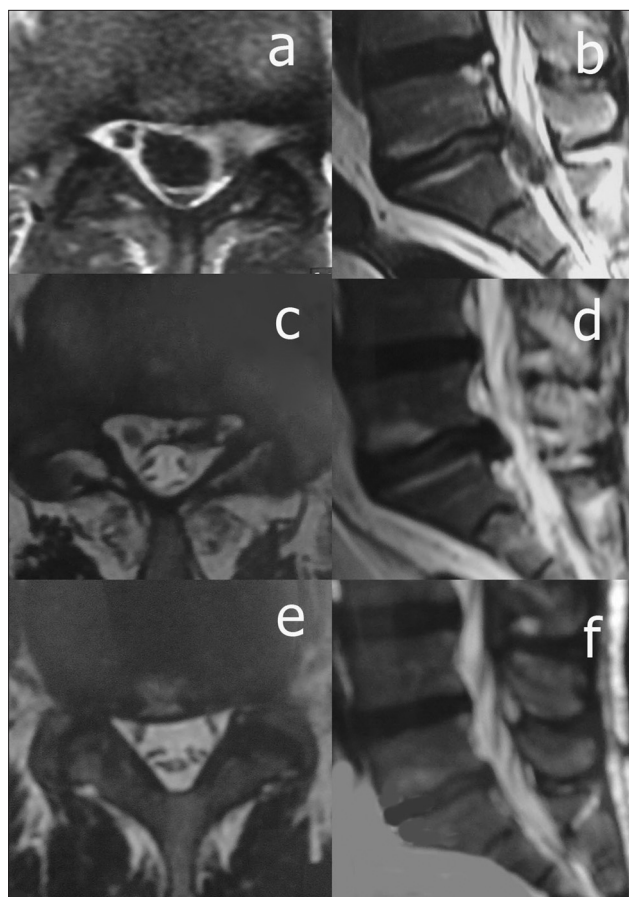
Spontaneous regression time is not known exactly. The different studies reported different results. Autio et al. reported that 68 of 160 patients documented by MRI with decreased herniated lumbar disc volume 2 months after the development of symptoms (7,8). Komori et al. retrospectively reviewed 77 patients and spontaneous regression has been reported 63% of patients in average of 150 days (2). Masui et al reported regression on 71% of patients 2 years after initial symptoms

(9). Takada et al. indicated effective regression 3 months after on %50 of patients (10). Some other studies revealed spontaneous regression of herniated lumbar discs was approximately 35-63% of symptomatic patients during a period of 6 month to 1 year (2,5). According to our knowledge fastest regression is reported in 2 months (6).

Authors aimed to demonstrate rapid volumetric regression of herniated lumbar disc. This report is also important to have both clinical, neurological and radiological regression. As the thought of failed back syndrome, main complication of lumbar disc surgery, conservative treatment should always kept in mind. Patients with stable or mild moderate neurological deficit with soft fragmented acute lumbar discs should be treated conservatively.

Conclusion

Indications of emergency lumbar disc surgery is well described. But indication and timing of elective surgery is still controversial. Experiences and the published literature



**Figure 1) a,b: Axial and sagittal imagings of initial T2 weighted lumbar mri scan.
c,d: Axial and sagittal imagings of T2 weighted lumbar mri scan 14 days after initial one.
e,f: Axial and sagittal imagings of T2 weighted lumbar mri scan one year after.**

indicating that period of spontaneous regression is not taking so much time as thought. This enhances the importance of conservative treatment. Mechanism of spontaneous regression and demographic features of symptomatologically recovered patients are still unclear. Further studies is needed to understand the regression nature of fragmented lomber discs.

This will make a clarification to the issue that which patients should we treat conservatively and what is the best time for that.

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