

Spontaneous Disappearance of Large Herniated Disk Fragments

Examples of spontaneous resolution of neurosurgical conditions are rare – with the exception of intracranial hemorrhages that resorb over time and distal bacterial aneurysms that may heal without surgery, most anatomical and functional problems that come to attention of neurosurgeons remain stable or worsen during follow up. Gradual worsening is pretty much expected whenever one talks about neoplasms, degenerative conditions, chronic infections or vascular stenosis, particularly if they are not aggressively treated. Similarly, even with appropriate medical management, symptomatic spondylosis deteriorates over time and frequently requires surgical intervention when symptoms become refractory to conventional treatment or disabling.

The indications for surgical discectomy are very straightforward, and whenever such patient presents with motor deficits, autonomic symptoms, severe pain that persisted for more than 3 months and has not improved (or improved only temporarily) with percutaneous interventions and systemic medications, and convincing radiographic evidence of disk herniation concordant with the patient's symptoms in terms of level and side of radiculopathy or myelopathy, the surgery is suggested / recommended.

There are, however, instances when, for whatever reason, the patients refuse to have surgery and continue their non-surgical management. Some of them improve, and this improvement may translate complete resolution of initial symptoms, most often radicular pain that was produced by mechanical compression of the nerve root by the herniated disk or its sequestered fragment. The article by Orief et al (5) on spontaneous disappearance of herniated disks documents such phenomenon in 6 patients, one of whom had this occur at the cervical level and the other five – at lower lumbar. Interestingly enough, although radiographic improvement was recorded at 4 to 9 months after initial diagnosis, symptomatic improvement occurred between 3 and 6 weeks making one speculate that clinical resolution of radiculopathy may precede radiographic regression – or that similar radiographic would have been documented earlier if these patients would have undergone follow up imaging sooner.

The authors' explanations on possible mechanisms for disk resorption are not new. As the matter of fact, we described all this in a very similar format in our paper that appeared in the predecessor of this journal exactly 10 years ago (7). However, the fact that this set of explanations did not change over a decade since our case report was published confirms the lack of in-depth research that would come up with conclusive explanation for this important phenomenon. It is indeed disappointing as one would always prefer to know in advance which herniated disks have to be removed and which may be left alone as they will be improving without intervention.

There are many recent publications on herniated disk regression that came out within the last 5 years (1-4, 6, 8) – they vary from single interesting case reports (2, 8) to large series (as many as 37 documented cases) (4) – and this abundance of published literature does indeed underscore importance of the authors’ observation and their suggestion to avoid rushing surgical intervention, particularly when the patient presents with well-documented disk fragment sequestration.

Konstantin V. Slavin, MD
Department of Neurosurgery
University of Illinois at Chicago

References:

- 1: Chang CW, Lai PH, Yip CM, Hsu SS. Spontaneous regression of lumbar herniated disc. *J Chin Med Assoc.* 2009; 72(12):650-3.
- 2: Gezici AR, Ergün R. Spontaneous regression of a huge subligamentous extruded disc herniation: short report of an illustrative case. *Acta Neurochir (Wien).* 2009; 151(10):1299-300.
- 3: Gurkanlar D, Yucel E, Er U, Keskil S. Spontaneous regression of cervical disc herniations. *Minim Invasive Neurosurg.* 2006; 49(3):179-83.
- 4: Martínez-Quiñones JV, Aso-Escario J, Consolini F, Arregui-Calvo R. [Spontaneous regression from intervertebral disc herniation. Propos of a series of 37 cases]. *Neurocirugia (Astur).* 2010; 21(2):108-17.
- 5: Orief TI, Orz YI, Atia WI, Almursea KN. Spontaneous resorption of sequestered intervertebral disk herniation: illustrative cases and review of literature. *World Neurosurg*, current issue.
- 6: Sabuncuoğlu H, Ozdoğan S, Timurkaynak E. Spontaneous regression of extruded lumbar disc herniation: report of two illustrative case and review of the literature. *Turk Neurosurg.* 2008; 18(4):392-6.
- 7: Slavin KV, Raja A, Thornton J, Wagner FC Jr. Spontaneous regression of a large lumbar disc herniation: report of an illustrative case. *Surg Neurol.* 2001; 56(5):333-6; discussion 337.
- 8: Stavrinou LC, Stranjalis G, Maratheftis N, Bouras T, Sakas DE. Cervical disc, mimicking nerve sheath tumor, with rapid spontaneous recovery: a case report. *Eur Spine J.* 2009; 18 Suppl 2:176-8.