

**Back pain with Sciatic symptoms.** Symptoms were improving with residual neurology.



**Diagnosis and Management?**

## **Diagnosis**

Massive disc herniation L5/S1 with resolving symptoms

The natural history of a lumbar hernia of the nucleus pulposus (HNP) is not fully known and clear indications for operative intervention cannot be established from the literature.

37 patients were studied by clinical assessments and serial magnetic resonance imaging (MRI) over 2 years [1]. Patients had severe sciatica at first, but began to show clinical improvement despite the large disc herniations. Serial MRI studies allowed measurement of volume changes of the herniated disc material over a period of time.

**RESULTS** Initial follow-up at an average of 23.2 months revealed that 83% had a complete and sustained recovery at the initial follow-up. Only four patients required a discectomy.

There was a poor correlation between clinical improvement and the extent of disc resolution.

A massive disc herniation can pursue a favorable clinical course. If early progress is shown, the long-term prognosis is very good and even massive disc herniation can be treated conservatively.

Controversy still exists regarding indications for operating on large, extruded discs. A large extruded disc has been a relative indication for operative treatment in the past. Weber published the first randomized, prospective trial of the long-term benefit of operative versus non-operative treatment of herniated lumbar discs. He found a statistically better result for operative intervention at 1 year. After 4 years, the operated patients still showed better results, but the difference was marginal and not statistically significant.

## **Question to be answered**

1. Is it safe to adopt a 'wait-and-watch' policy for cases of massive disc herniation, thus allowing time for the symptoms to resolve spontaneously?  
Yes. Quite safe. Observe for any future neurological deterioration.
2. Can cases of massive disc herniation show clinical improvement which is complete and sustained?  
Yes in 83% cases
3. Is there a trend for massive disc herniations to cause recurrent clinical crises?  
Risk for recurrent herniation is not more than following microdiscectomy or cases with mild disc herniation. Only 17% of cases will have recurring crises of back pain and sciatica.
4. Is there an unacceptable risk of nerve damage or cauda equina syndrome resulting from the conservative approach?  
No. [1,3]

5. What happens to the large volume of nucleus pulposus lying within the canal? Does it disappear by a process of resorption or does it remain in the canal? Several studies using CT and MRI have demonstrated that the largest lumbar intervertebral disc herniations have the greatest ability to regress over time. [4]. The mechanism by which herniated discs are resorbed is not fully understood. It is generally thought that an immune response develops to the disc tissue and inflammation helps to remove the invading tissue. Evidence suggests macrophages and neovascularisation play central roles in the resorption of discs following prolapse.

### **References**

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2. Bush : The natural history of sciatica associated with disc pathology. *Spine* 1992; **17**: 1205–12.
3. Weber. Lumbar disc herniation. *Spine* 1983; **8**: 131–40.
4. Maigne .CT follow-up study of 48cases of nonoperatively treated lumbar IVD *Spine* 1992; **17**: 1071–4.

