

# Disc prolapse

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## Case presentation

A 41-year-old man presents with acute sciatica following a lifting injury. How is this best managed?

## Discussion The diagnosis

About 90% of people will experience an acute episode of lower back pain, and many of these episodes are caused by a prolapsed disc. The intervertebral disc is comprised of a thick annulus fibrosis and the gelatinous nucleus pulposus. With time, the disc degenerates and this can be associated with a prolapse of disc material, which results in the clinical picture of sciatica. Sciatica is caused by both the mechanical effect of the disc prolapse and an intense inflammatory response.

## History and examination

The history should include the mechanism of injury but should also specifically include any neurological symptoms relating not only to the lower limb but also to the bowel and bladder habits. Examination should include an assessment of tenderness. There will also be associated paravertebral muscle spasm. Straight-leg raising test should be performed. Dorsiflexion of the ankle (Lasegue's test) at the time of straight-leg raising is often indicative of sciatic nerve root tension. A thorough neurological examination should be performed including sensation, muscle power and reflexes. Extension of the hip with the knee flexed and the patient prone (femoral nerve stretch test) is an assessment of femoral nerve root irritability. Perianal sensation should also be carefully assessed.

Both CT and MRI scanning can demonstrate a disc prolapse (Figure). The indications for each will depend on cost and availability.

## Treatment

In most cases the initial treatment of a disc prolapse is nonsurgical. The pain in about 90% of patients will settle in six to 12 weeks with a conservative approach. The only indication for urgent surgery is cauda equina syndrome. This can be associated with a massive disc prolapse of the dura below the level of the spinal cord. It is associated with varying degrees of paralysis (often bilateral), bladder dysfunction and saddle anaesthesia of

PIC NOT AVAILABLE

Figure. MRI of the lower spine showing a disc prolapse.

the perineum. Acute motor dysfunction of the lower limb – for example, foot drop, is a relative indication for early surgery.

Most patients with a disc prolapse will respond to a conservative approach, which includes rest, analgesics, anti-inflammatory agents, physiotherapy and pelvic traction. Occasionally fluoroscopic-guided cortisone injections can be helpful. Patients not responding to these measures can be considered for surgery. This generally includes either microdiscectomy or conventional discectomy. There is some support for microdiscectomy as providing a quicker recovery. The literature suggests that at 12 months, patients having operative or nonoperative treatment have similar results, but does suggest an earlier resolution of pain in the surgically-treated patients.<sup>1</sup>

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## Reference

1. Gibson JNA, Waddell G. Surgical interventions in lumbar disc prolapse. *Cochrane Database Syst Rev* 2007, Issue 2: CD001350.

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