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Lumbar discectomy for lumbar disc prolapse

What is a lumbar disc prolapse?

A lumbar disc prolapse is a protrusion of part of a lumbar disc. When the protrusion touches or presses against one of the nerves in the back, pain down the leg (sciatica) results. Lumbar disc prolapse is known by many different names, such as prolapsed disc, protruding disc, herniated disc, ruptured disc, collapsed disc, slipped disc and so on.

Why should the disc prolapse?

Most people developing sciatica have had some back trouble in the past, though not necessarily bad enough to see a doctor. A normal healthy disc does not undergo prolapse, unless a severe accident occurs. Most cases occur as "the straw that breaks the camel's back". There has been gradual deterioration in the structure of the disc going on behind the scenes over many years, causing only minor or intermittent backache. Eventually, the disc prolapse occurs in an already weakened disc, and the severe symptoms develop. Often some fairly ordinary activity seems to have caused the prolapse, such as a game of tennis or an episode of gardening, but in reality this is only the "last straw". Not infrequently, people develop sciatica without being aware of any specific injury or event.

How is the diagnosis made?

The diagnosis is often made with CT scans of the lumbar spine. Where these suggest the diagnosis but are not entirely conclusive, either an MRI scan or a myelogram will clarify the diagnosis.

What is an MRI scan?

This is a simple and safe test, similar in many ways to a CT scan. The scans are produced using a technique known as magnetic resonance imaging, and no radiation is involved. There is no need for admission to hospital. People with heart pacemakers cannot have the test. There is usually no need for any injections, but people prone to claustrophobia may find the examination somewhat stressful, and should report any anxiety at the time of the test.

What is a myelogram?

This is an X-ray examination done in hospital, usually involving an overnight stay. A radiologist (specialist doctor) injects a small quantity of dye into the spinal fluid of the lower back, after which x-rays and CT scans are performed. The dye outlines the spinal canal, clearly revealing the point of pressure on the nerve(s). It is

usually a simple and safe test, but on occasions it can temporarily worsen the sciatica, and headaches occur after the test in about 20% of people. The headaches can be severe, though they are rarely dangerous and usually pass in a day or two.

Why do I need surgery?

The main reason for recommending surgery is to relieve sciatica, the pain that radiates down the leg. If there is evidence of nerve damage causing weakness in the foot or leg, surgery may also be advisable even if the pain is not severe. It is not customary to perform a disc operation for the relief of back pain. In other words, surgery is performed on the back but is for the legs.

What is actually done in the operation?

On the morning of surgery, you may be taken to x-ray for a marker. The radiologist places a small mark over the correct level in the spine - this usually involves a minor injection just into the skin at the appropriate point.

In the operation itself, through an incision running vertically over the small of the back, an opening is made between the vertebrae. This is usually no bigger than a 5 cent piece in diameter. The protruding disc is identified, the nerve is moved gently to one side, and the protrusion is trimmed flush. Often some additional disc material is removed to reduce the risk of any recurrence of the prolapse, especially in the early weeks after the operation. A small hole is left in the disc at the site of the prolapse - this seals over naturally after several weeks.

Often a lumbar discectomy is called a laminectomy, but strictly speaking a laminectomy is an operation in which part of the vertebra known as the lamina is removed. Usually a lumbar discectomy is performed without removing the lamina (laminectomy). Occasionally it is necessary to carry out a laminectomy in order to get to the disc prolapse. It is worth knowing that the terms discectomy and laminectomy are often loosely interchanged, though technically that is not always accurate. A blood transfusion is almost never needed.

What about risks and complications?

The risk of serious complications is low, and the risk of death is remote. Complications are of two types, general and specific. General complications are those that can occur with any operation, while specific complications are those relating to laminectomy for the disc prolapse. General complications are in general related to age and to underlying disease. A person aged 75 years with diabetes and a history of heart attack is at greater risk of complications than a 40 year old with perfect health. General complications include stroke, heart attack, bleeding in the wound postoperatively, blood clots in the legs (which can travel to the lungs or heart) and infection.

Specific complications include damage to one or more of the nerves travelling through the spinal canal. This could cause permanent numbness or weakness in the legs or feet (or to some part of one or other leg), and on rare occasions could affect control of bladder or bowel.

Serious complications are rare. You should not be unduly concerned with the risk of serious complications. However, failure of the surgery to meet expectations (without anything going wrong) is a more likely possibility. This means that despite the best efforts of the patient and the surgeon, the symptoms do not respond to surgery, as one would normally expect. This is very disappointing but does occur in up to 10 percent of cases. Reasons are not always obvious.

How long will I be in hospital?

If a myelogram is needed, the usual stay would be about 8 days. If no myelogram is required, then allow about 7 days.

What can I expect after the operation?

There will be some pain in the area of the wound itself, as well as some pain in the leg in the first few days. There will be an intravenous drip inserted during the operation, and through this strong pain relief will be given for the first 48 hours or so. After that, tablets will be used, along with occasional injections as required. It will be difficult to roll over in bed for the first few days, and during this time the nurses will play an important role. The first standing out of bed usually occurs 48 hours after surgery, though can be attempted sooner. After a few days, most people are able to get in and out of bed unassisted and to take walks around the ward quite comfortably. Bowel actions usually do not occur until the fourth or fifth day after surgery - this is quite normal and should not cause any concern.

Will I need physiotherapy?

Most patients are seen by a physiotherapist during their stay in hospital, mainly to ensure that the simple movements like getting out of bed are done correctly. There is usually no physiotherapy during the first six weeks or so after discharge from hospital, and only a minority of people will need on-going physiotherapy after that.

What about when I get home?

The most important aspect of the first six weeks after surgery is rest. Just as concrete needs time to dry and harden, so too does the wound need time to heal, internally as well as externally. This takes at least six weeks. Undue bending and lifting during this time must be avoided. Sitting should be minimised to essentials, such as toilet and eating. Driving is generally considered inadvisable in the early weeks, even as a passenger. The best plan is to schedule two good walks of about 15 mins each per day, and to spend most of the remaining time resting. Swimming is an excellent exercise after spinal surgery, but should not begin until after you have attended your General Practitioner.

It is hard to predict how long it will take for recovery to be completed. In most cases, the symptoms due to the disc prolapse will have eased within six weeks, but you should not regard this as a deadline - some people take much longer than this to get benefit from surgery.

Will I need rehabilitation?

Not every one needs formal rehabilitation. However, if there are going to be problems coping alone at home, for example, then a week or two in a rehabilitation hospital can be time very well spent. Also, if there is significant incapacity prior to surgery, or there are complicating medical factors that may slow the recovery process, then rehabilitation is advisable.

If your disc prolapse is the result of an injury at work, then you will require a rehabilitation program. The type of program needed will depend on the nature of your work, the size of the workplace, the duration of symptoms and on the details of the surgery itself. Rehabilitation may involve input from a number of sources, such as your family doctor, your employer or rehabilitation service providers, whether they be as an inpatient or outpatient.

A handwritten signature in black ink, appearing to read 'P. D'Urso', with a stylized flourish above the name.

Paul D'Urso
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