

Scalpel Erasmus 1st online session

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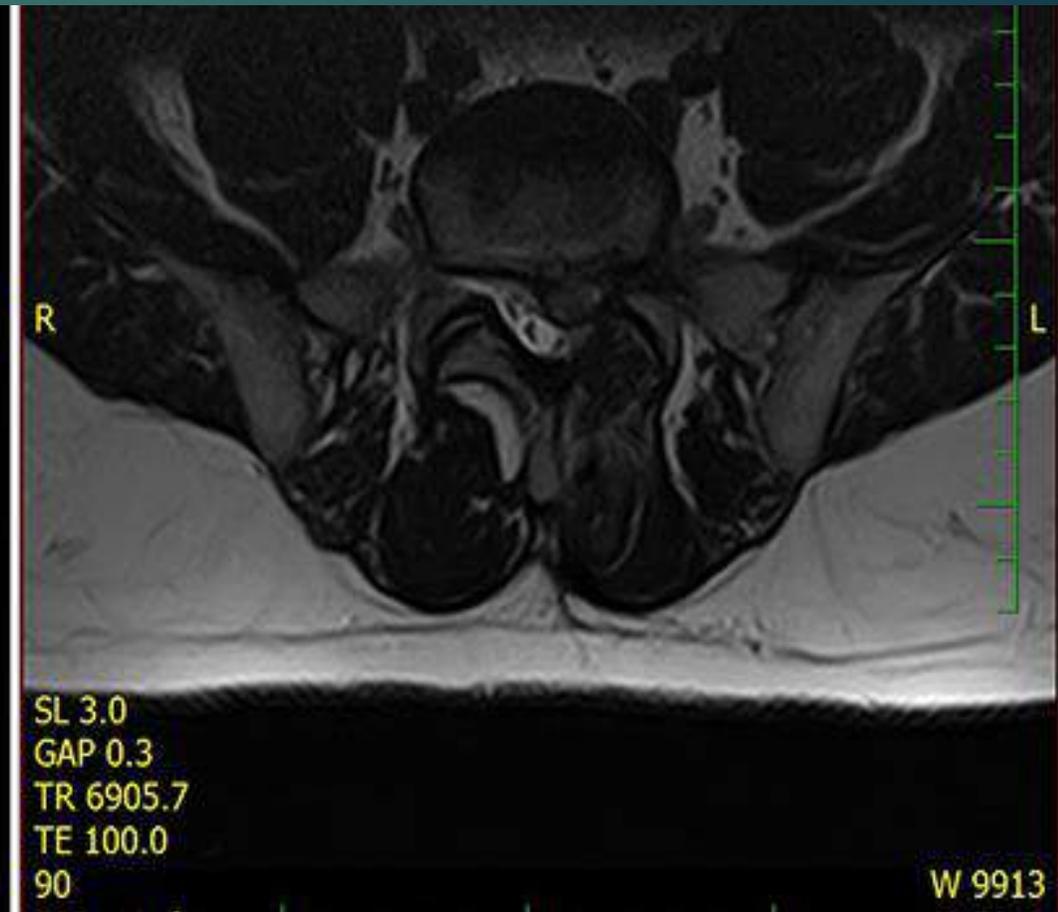
Case report

- ▶ Male, 64 years old
- ▶ Long lasting low back pain, treated several times with painkillers, physiotherapy
- ▶ Now deterioration - sharp, often shooting pain that extends from the low back down the back side of left leg
- ▶ He is not able to walk and his plantar extention is weak, the weakness occurred several days ago
- ▶ Bladder and bowel control is without any problems

Case report

- ▶ Your suggestion?
- ▶ Can you propose any other additional investigation
- ▶ If you think that this patient is suffering from herniated disk, can you tell us 5 other low back diseases and explain why have you decided for disc herniation

MR scan

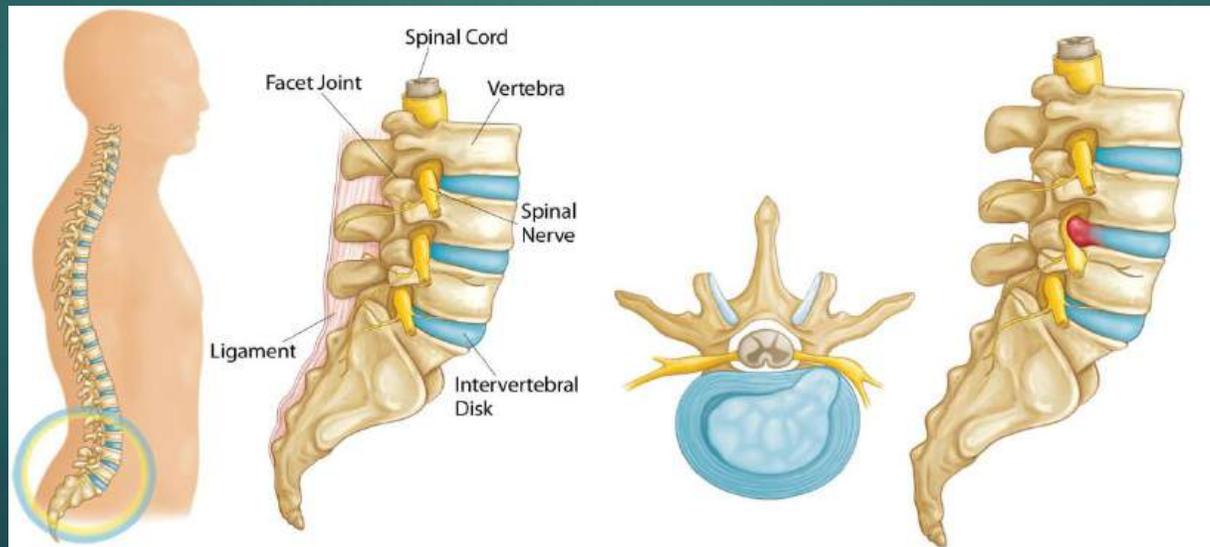


Case report

- ▶ Is it necessary to do another additional tests – for example EMG?
- ▶ If you answer would be “yes”, which results would you expect
- ▶ Discuss the benefit of any additional tests if you have information about patient’s clinical signs and MR scan
- ▶ What procedure or type of treatment would you offer to the patient?

Herniated disk

- ▶ Between 60 and 80% of people will experience low back pain at some point their lives
- ▶ Some of these people will have low back pain and leg pain caused by a herniated disk
- ▶ Although a herniated disk can be very painful, the majority of people feel much better with just a few weeks or months of nonsurgical treatment



Herniated disk

Cause:

- ▶ A result of natural, age-related wear and tear on the spine (degeneration)
- ▶ As people age, the water content in the disks decreases and the disks become less flexible. The disks begin to shrink and the spaces between the vertebrae get narrower

This normal aging process makes the disks more prone to herniation

- ▶ A traumatic event, such as a fall, can also cause a herniated disk

Risk factors

- ▶ **Gender** Men between the ages of 40 and 50
- ▶ **Improper lifting** Using your back muscles instead of your legs to lift heavy objects
 - ▶ Twisting while you lift can also make your back vulnerable
- ▶ **Overweight**
- ▶ **Repetitive activities that strain the spine**
- ▶ **Frequent driving**
- ▶ **Sedentary lifestyle**
- ▶ **Smoking** It is believed that smoking lessens the oxygen supply to the disk and causes more rapid degeneration

Symptoms

- ▶ Low back pain is the first symptom of a herniated disk. This pain may last for a few days, then improve
- ▶ Sharp, often shooting pain that extends from the buttock down the back of one leg caused by pressure on the spinal nerve.
- ▶ Numbness or a tingling sensation in the leg and/or foot
- ▶ Weakness in the leg and/or foot
- ▶ **Loss of bladder or bowel control**

This is extremely rare and may indicate a more serious problem called cauda equina syndrome. It requires immediate medical intervention

Physical (neurological) examination

- ▶ Checking muscle strength in a leg by assessing of walking on both heels and toe
- ▶ Detecting loss of sensation by checking of feeling a light touch on the leg and foot
- ▶ Testing the reflexes at the knee and ankle. These may sometimes be absent if there is a compressed nerve root
- ▶ Straight leg raise (SLR) test. This is a specialized test to predict if a disk herniation is present, especially in younger patients



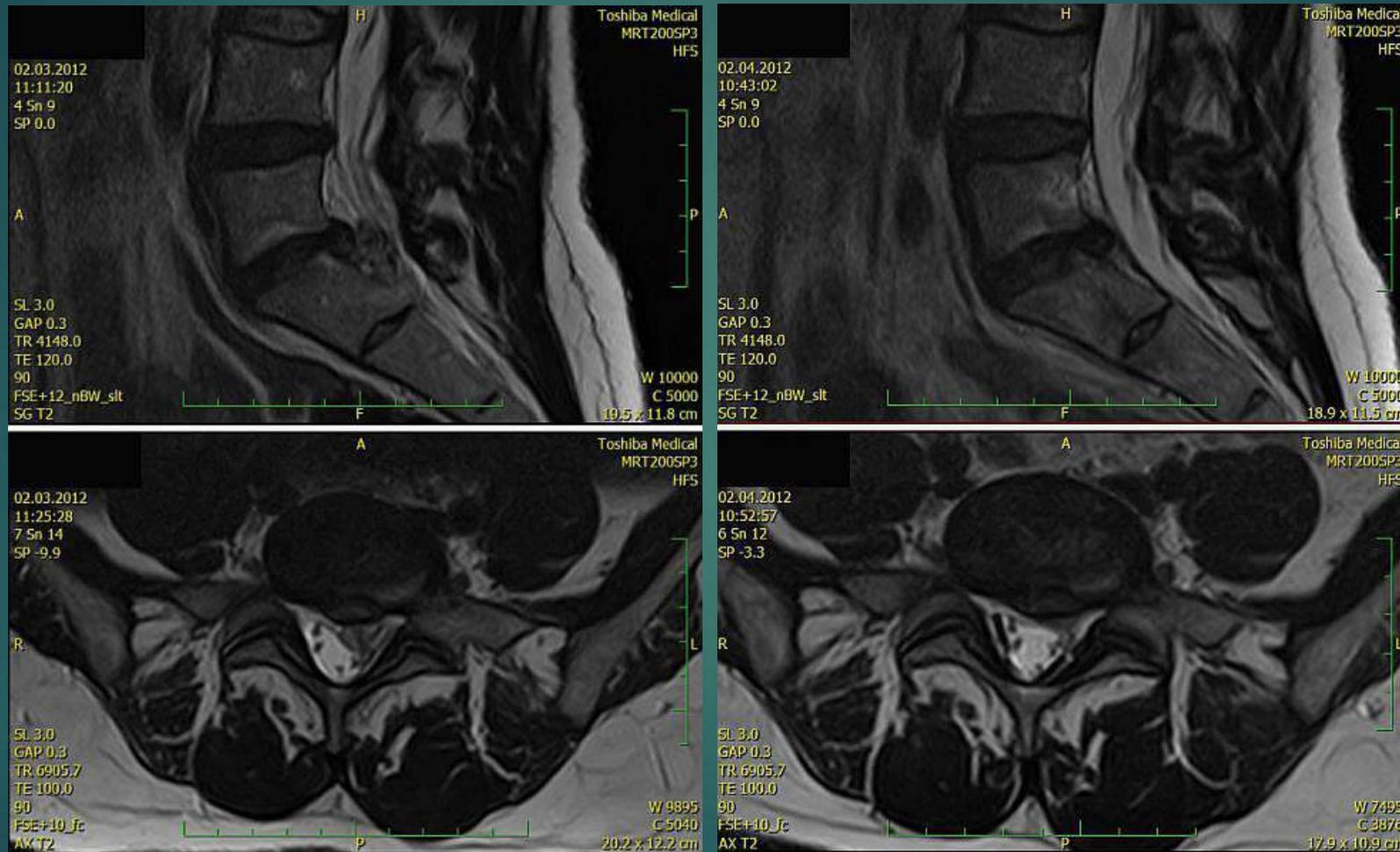
Nonsurgical treatment

- ▶ For the majority of patients, a herniated lumbar disk will slowly improve, typically, most patients are free of symptoms by 3 to 4 months
- ▶ One to 2 days of bed rest will usually help relieve back and leg pain
- ▶ Take rest breaks throughout the day, but avoid sitting for long periods
- ▶ Nonsteroidal anti-inflammatory drugs (NSAIDs)
- ▶ Physical therapy
- ▶ Epidural steroid injection
- ▶ It is important to note that these nonsurgical treatments do not heal the herniated disk. Rather, they can help relieve the symptoms. In many cases, the disk herniation naturally dissolves over time and is reabsorbed by the body

Epidural steroid injection



Spontaneous resolution of disk hernia



Surgical treatment

- ▶ Only a small percentage of patients require surgery
- ▶ Spine surgery is typically recommended only after a period of nonsurgical treatment has not relieved painful symptoms, or for patients who are experiencing the following symptoms:
 - ▶ Muscle weakness
 - ▶ Difficulty walking
 - ▶ Loss of bladder or bowel control
- ▶ Microdiskectomy - The most common procedure used to treat a single herniated disk
- ▶ The herniated part of the disk is removed along with any additional fragments that are putting pressure on the spinal nerve
- ▶ A larger procedure may be required if there are disk herniations at more than one level

Surgical risks and complications

- ▶ Surgical risks generally - bleeding, infection, and reaction to anaesthesia

Specific complications from surgery for a herniated disk include:

- ▶ Nerve injury
- ▶ Infection
- ▶ Tear of the sac covering the nerves (dural tear)
- ▶ Hematoma causing nerve compression
- ▶ Recurrent disk herniation (early or delayed)

Outcome

- ▶ Overall, the results of microdiskectomy surgery are generally very good
- ▶ Patients tend to see more improvement of leg pain than back pain
- ▶ Most patients are able to resume their normal activities after a period of recovery following surgery (6 weeks)
- ▶ Typically, the first symptom to improve is pain, followed by overall strength of the leg, and then sensation
- ▶ In recent years, there has been extensive research on the treatment of disk herniation

Considerations

- ▶ With both surgical and nonsurgical treatment, there is up to a 20 to 25% chance that the disk will herniate again in lifetime
- ▶ The risk of nonsurgical treatment is that the symptoms may take a long time to resolve
- ▶ Patients who try nonsurgical treatment for too long before electing to have surgery may experience less improvement of pain and function than those who elect to have surgery earlier
- ▶ Studies suggest that at around 9 to 12 months, the surgical outcomes are not as beneficial as if undergoing surgery prior to 9 months