



# Swiss Scoliosis

Centre for spinal and scoliosis surgery  
Zentrum für Chirurgie der Wirbelsäule und Skoliose

## *Lumbar disc herniation*



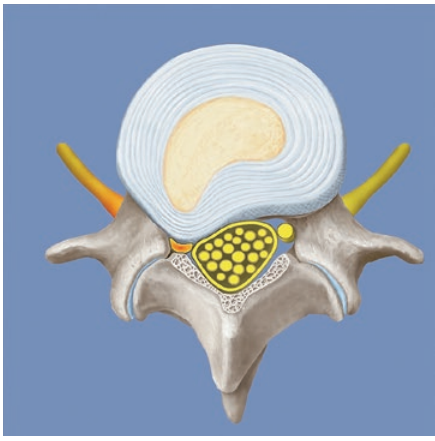


Abb. 1

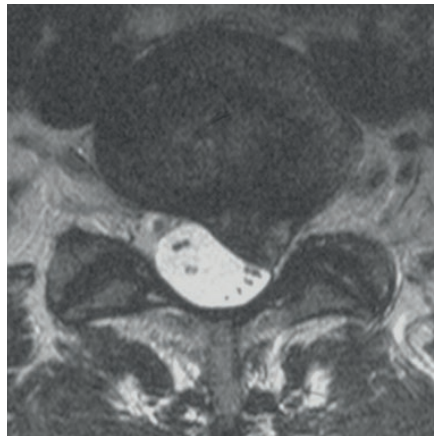
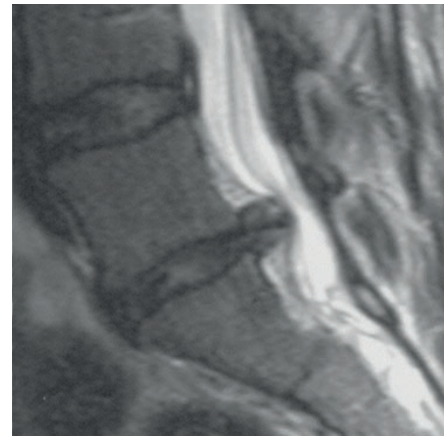


Abb. 2



## Lumbar disc herniation

*Degeneration causes tears in the outer layer of the disc resulting in herniation of inner gelatin portion (nucleus pulposus) of the disc into the spinal canal. This results in compression of the nerves (Fig.1 & 2). The nucleus pulposus tissue also causes acute inflammation. This combination results in radiating pain in the leg and weakness of leg, foot, disturbance of bladder and bowel emptying.*

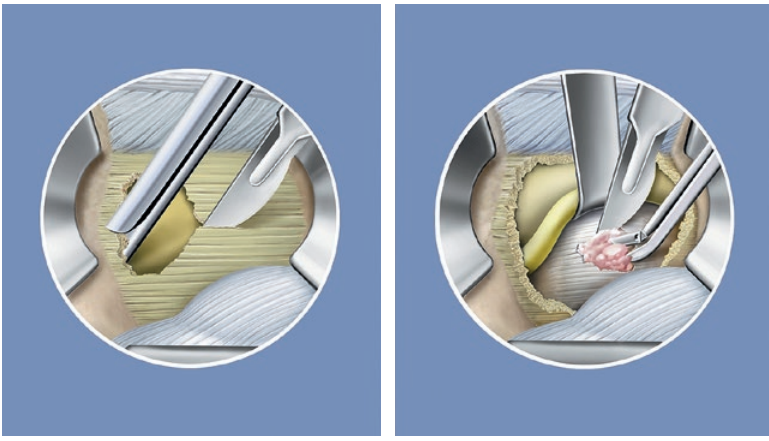


Abb. 3

## Treatment

### Conservative treatment

*In the absence of weakness or paralysis many cases with disc herniation can be treated non-operatively. This includes rest, pain medication, physiotherapy and in selected cases nerve root injection.*

### Operation

*In the presence of neurological problems or very severe pain which is not responding to non-operative treatment, the surgical treatment is indicated. Sudden and severe weakness of legs or disturbance of bladder and bowel function may require an emergency operation to decompress the nerves.*

### Operation technique

*The classical technique of open surgical decompression is the gold standard of care. A skin incision of 3–5 cm in length is made in the mid-line of the lumbar region and the muscles are retracted to the side. A microscope or magnifying glasses with head lamp are used to assist in the exposure of the spinal canal. The affected nerve is exposed and held to the side. The disc herniation under the nerve can be removed with a special forceps (Fig.3). The operation takes 45–60 minutes on average.*

### Postoperative treatment

*Patients can stand up the same day after the operation. The hospital stay is 3–5 days. The patient receives instructions from the physiotherapists to do light exercises. The first out-patient follow-up is takes place after 4 weeks, after which full return to normal daily activities is allowed.*

### Operation risks

*Complications are seldom. Nerve root injury can occur during the direct decompression of the nerve from disc tissue and bony spurs in about 1%. In most cases the nerve function recovers with time, persisting neurological weakness is very seldom seen. Injury of the nerve sheath (Dura) can lead to leaking of spinal fluid. But this can be recognized and repaired during the operation. Very seldom a postoperative hematoma can develop and cause compression of the nerves resulting in paralysis of the legs, feet, bladder or bowel. Recurrence of disc herniation in the same place can occur in 5–6% of the cases, which usually requires a re-operation.*

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