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LUMBAR DISC SEQUESTRATION ON TWO LEVELS MIMICKING A EXTRADURAL TUMOR- CASE REPORT

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Abstract

Sequestered intervertebral disc herniation represents an advanced and severe form of disc pathology in which a fragment of the nucleus pulposus becomes completely separated from the parent intervertebral disc and migrates into the spinal canal[1].

This condition can lead to significant compression of neural structures, resulting in acute back pain, radiculopathy, sensory deficits, and motor weakness. Magnetic resonance imaging (MRI) is the diagnostic modality of choice, enabling precise localization of the sequestered fragment and assessment of its relationship to adjacent neural elements.[2]

Treatment approaches vary depending on symptom severity and neurological involvement, ranging from conservative management to surgical intervention, particularly in cases of progressive neurological deterioration or intractable pain[3].

CASE REPORT

43 -year- old male patient with severe pain in the lumbar pain with paresthesia in right leg. He had burning sensation in right arm.

The condition started 5 weeks prior, after lifting heavy weight. The condition has been evolving despite conservative therapy consisting of analgesia, NSAIDs, muscle relaxants and physiotherapy.

Using Numeric pain rating scale (NPRS) 7 in both hands,neck and upper thorax. With paresthesia in the right leg. Motor strength in right leg 4/5, left leg 5/5

During examination Laseque sign positive on the right leg 30 degree +++ and on left leg 70 degree +

On the MRI of the lumbar region with contrast findings were suspected for tumor extradural or discus extrusion with sequester of level L4-L5, L5-S1 (picture 1, 2 and 3).

Operation was indicated. After confirming the level L4-L5 and L5-S1 with RTG incision was made. After flavectomy was made, part of the sequester was presented.

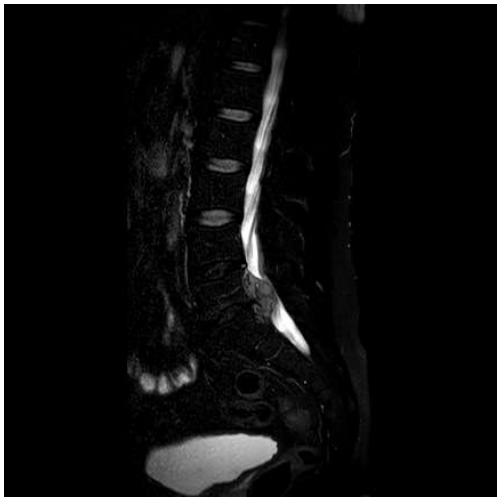
The disc was completely removed, nerve was liberated. Local hemostasis was made and the wound was closed.

Results

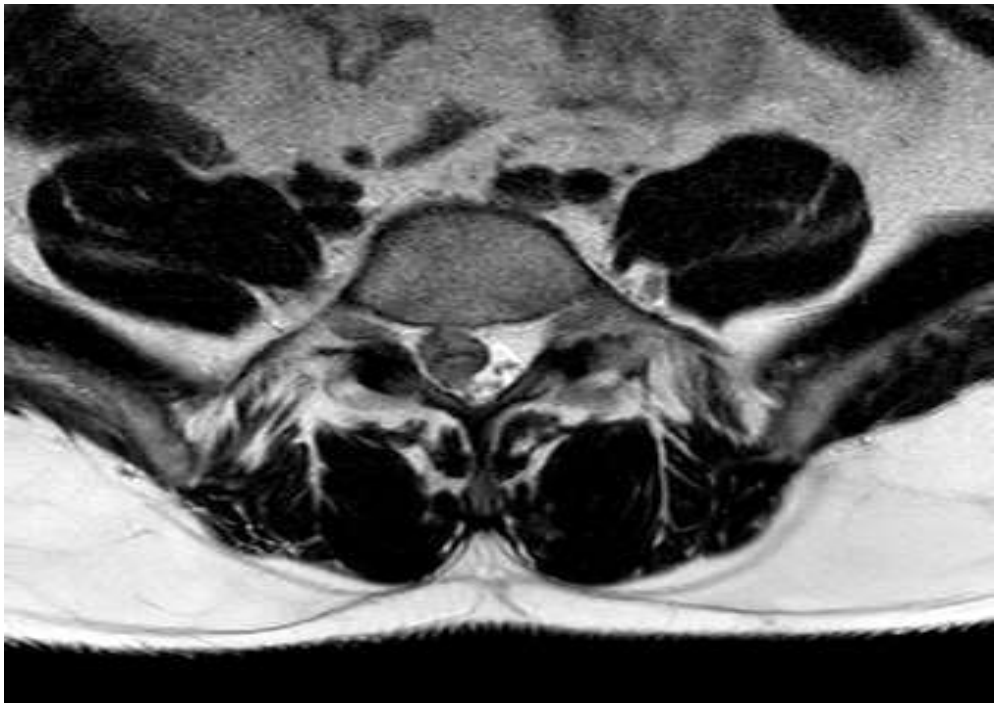
Day after procedure the patient was feeling good. Pain in right leg was more than 50% gone and paresthesis in the leg were less.

On the checkup 1 week after operation treatment pain was moderate [3], motor strength in both legs was 5, NPRS was 3. Surgical wound normal.

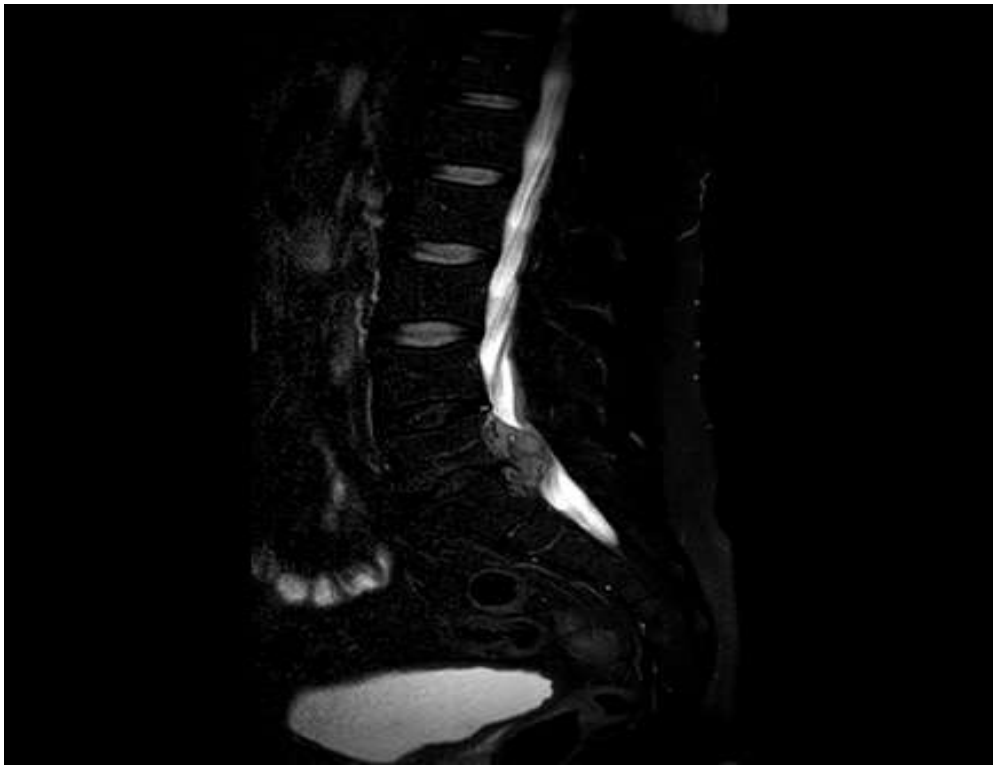
On the second checkup 2 weeks after operation pain on NPRS was 1, no paresthesis.



Picture 1.



Picture 2.



Picture 3.

Picture 4.

The most commonly accepted method of evaluating muscle strength is the Medical Research Council Manual Muscle Testing scale. This method involves testing key muscles from the upper and lower extremities against the examiner's resistance and grading the patient's strength on a 0 to 5 scale accordingly:

(2)

- 0 No muscle activation
- 1 Trace muscle activation, such as a twitch, without achieving full range of motion
- 2 Muscle activation with gravity eliminated, achieving full range of motion
- 3 Muscle activation against gravity, full range of motion
- 4 Muscle activation against some resistance, full range of motion
- 5 Muscle activation against examiner's full resistance, full range of motion[4]

Discussion

Intervertebral disc herniation refers to displacement of the intervertebral disc outside its anatomical space. Disc sequestration is defined as the migration of protruding disc fragments into the epidural space and complete separation from the parent disc[5].

Intervertebral disc herniation is closely related to degeneration of the intervertebral disc. When a herniated intervertebral disc prolapses into the epidural space, it expands rapidly because the intervertebral disc nucleus is rich in proteoglycans with strong hydrophilicity.

The spinal cord and nerve root are easily compressed during the early stage of congestion, resulting in clinical symptoms [4].

Repeated minor traumas or previous surgery can exacerbate the adhesions. Due to the anatomical structure of the anterior epidural space, most cases involve movement of intervertebral disc fragments in the lateral, cranial, or caudal direction. In rare cases, fragments move back into the posterior epidural space or are located in the dura mater. The lumbar spine is the most commonly affected area, but the intervertebral discs of cervical and thoracic vertebrae may be displaced. Because of the uncertainty of the anatomical location and atypical imaging features, the free disc fragments in the spinal canal are easy to misdiagnose as spinal tumors.[6]

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