

TARLOV'S CYST

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Tarlov's cyst is an outpouching of the perineurial space on the extradural portion of the posterior sacral or coccygeal nerve roots at the junction of the root of the ganglion.¹ Most cases are asymptomatic, but when the adjacent nerve roots are impinged upon by the thin-walled cysts, low back pain, sciatica and sacrococcygeal pain, sensory and motor disturbance in the lower extremities, and urinary dysfunction may occur. We present a case of Tarlov's (perineurial) cyst which was treated by decompression of the nerve root and plication of the cyst. A literature review and methods of treatment are also presented.

Case Report

A 60-year-old lady presented with a history of low back pain of six years' duration. The pain radiated to the left buttock and left leg. The pain was aggravated by standing and walking, and was associated with a burning sensation over the lateral aspect of her foot. There was no history of leg weakness or bowel or bladder disturbances. The pain progressively became worse and she was taking narcotics every four hours.

Her past medical history revealed a cerebral aneurysm in the past that required clipping. On examination, the gait was normal, and her back showed no deformity or tenderness, but the range of motion was reduced. Straight leg raising was limited to 30° on the left side. Muscle power was 5/5 in all muscle groups. Sensation and reflexes were intact.

Plain x-ray of the lumbosacral spine was normal. Myelogram showed a cyst in the region of the S1 nerve root on the left side (Figure 1). A CT scan of the lumbosacral spine showed a two-centimeter soft tissue mass in the left intervertebral foramina, displacing the S1 nerve root anterolaterally. There was also enlargement of the foramina with some bony erosion. The CT myelogram

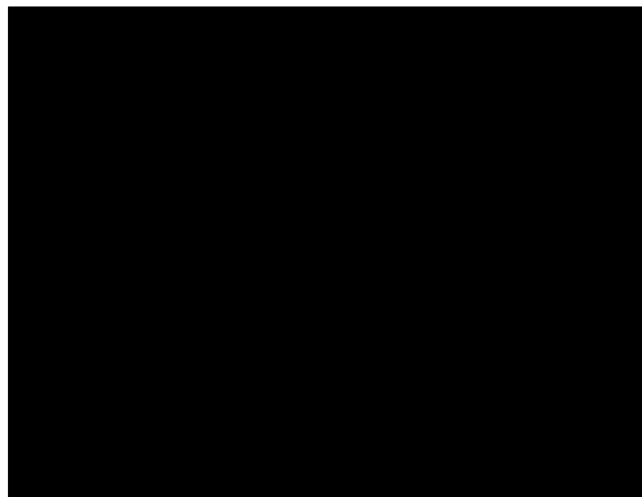


FIGURE 1. Myelogram of lumbosacral spine showing cyst at left S1 nerve root (arrow).

confirmed a cystic mass at the S1 nerve root on the left side (Figure 2).

The patient had nonoperative treatment in the form of NSAIDs, pain medication and physiotherapy for six months, but her symptoms became progressively worse. Surgery was discussed with her and she was admitted to the orthopedic service and then to the Operating Room, where a left-sided S1 hemilaminectomy and decompression of the S1 nerve root were performed. There was a large cystic mass around the S1 nerve root and it was covered with thin dura. The cyst was drained by applying continuous pressure. It was then opened and plicated. The volume of the cyst was reduced significantly.

Postoperatively, the patient reported significant relief of her symptoms. She had complete relief of pain during the follow-up period of five months. Subsequently, she started to develop low back pain and leg pain similar to her preoperative symptoms. Examination findings were unchanged and CT scan of her lumbosacral spine showed recurrence of the cyst (Figure 3). She was treated with analgesics, physiotherapy and referred to the Pain Service.

At follow-up two years after her operation, she still had back and leg pain, but not as severe as that which she experienced prior to surgery.

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Accepted for publication 6 October 1997. Received 14 July 1997.

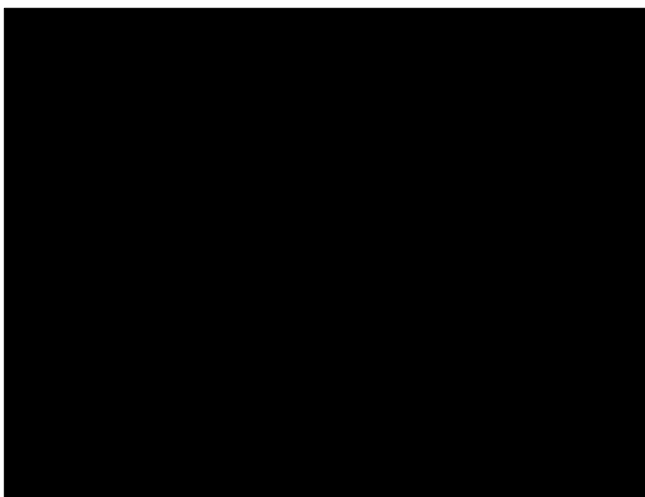


FIGURE 2. CT myelogram of lumbosacral spine showing cystic mass at S1 area (arrow).

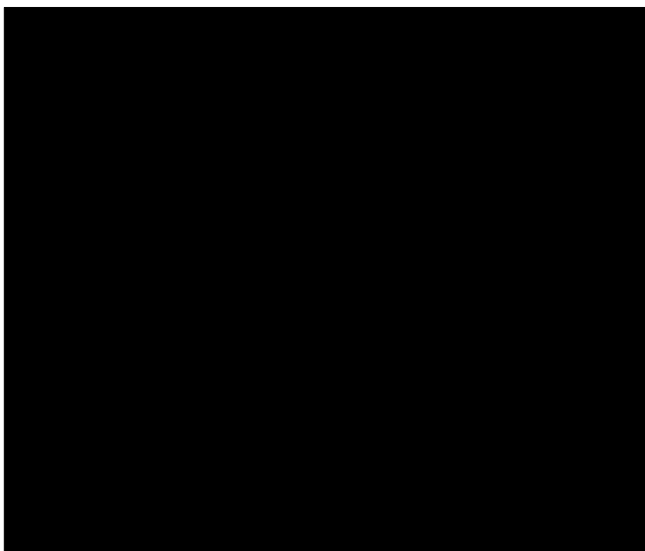


FIGURE 3. CT scan of lumbosacral spine showing recurrence of the lesion (white arrow) and scar tissue (arrowhead).

Discussion

The symptoms of Tarlov's cyst are similar to those brought on by lumbar disc prolapse. The symptoms are more pronounced if the communication with the sub-arachnoid space is poor and pressure erosion is present on x-ray.¹ Microscopically, the cyst walls consist of peripheral nerve fibers or ganglionic cells covered with meningeal epithelium.² They can be multiple and in an eccentric location within the sacral canal.

Tarlov's cyst was first described by Tarlov as an incidental finding at autopsy.³ Most cases are asymptomatic and are shown coincidentally in myelogram

or MRI for other reasons. The prevalence of these cysts is reported to be 4.6%, with 1% of these patients being symptomatic.⁴ In diagnosing these cysts the contrast material does not readily enter the cyst at myelography and CT scan, and delayed filling is typical. Magnetic resonance imaging can be very useful in diagnosing these cysts.⁵

Differential diagnoses of the lesions include sacral extradural cyst, occult intrasacral meningocele, anterior sacral meningocele, neurofibroma, schwannoma of the sacral region and prolapsed disc.⁶ There are very few cases reported in the literature and the treatment options for these lesions are few.

In 1948, Tarlov reported a case of sciatica pain due to perineurial cyst. The removal of the cyst relieved the symptoms. In 1984, Rodziewicz et al. treated these patients by applying continuous pressure until the cyst slowly drained. Then gentle bipolar cautery was used to shrink the cyst. This is a useful technique when there are multiple cysts.⁵ In 1994, Paulsen et al. treated these patients by using CT-guided percutaneous drainage of the cyst.⁴ They found this technique to be a quick and simple way of attaining a pain-free interval and possibly a complete cure.

Another option in selected cases is treatment by decompressing the nerve root and plicating the cyst wall to reduce its size. Interestingly, our patient had a previous history of cerebral aneurysm, indicating that there may be something in common between the two disorders, i.e., connective tissue or collagen disorders.

In summary, Tarlov's cyst is uncommon and usually asymptomatic, but when symptomatic it can cause low back pain and/or leg pain similar to that seen in prolapsed intervertebral disc, and when treated surgically the results are unpredictable.

Acknowledgements

I would like to thank Dr. G. Russell for allowing me to report this case.

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