

Sciatic neuralgia associated with a perineural (Tarlov) cyst

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Perineural (Tarlov) cysts are rare and are usually asymptomatic and an incidental finding on routine spinal imaging. Presented here is a case of sciatic neuralgia in a 56-year-old patient whose clinical symptoms correlated with a lower lumbar perineural cyst.

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KEY WORDS: chiropractic, perineural cyst, Tarlov cyst, sciatica

Case Presentation

A 56-year-old man presented with a 2-year history of severe and progressing left-sided low back and leg pain, described as “sharp” and “pinching” when either walking or arching his lower back. The pain severity was rated as a nine out of 10, and his overall Bournemouth Questionnaire¹ score totalled 39 out of a possible 70, where zero equals no disability and 70 equals complete disability. The low back and leg symptoms were most intense in the evening. Flexing his left leg at the knee joint and or taking non-steroidal anti-inflammatory medication

Les kystes périmébraux (Tarlov) sont rares, et sont généralement asymptomatiques et une observation fortuite d'une imagerie routine de la colonne. Nous présentons ici un cas de névralgie sciatique chez un patient de 56 ans dont les symptômes cliniques correspondaient à un kyste périmébral lombaire.

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MOTS CLÉS : chiropratique, kyste périmébral, kyste de Tarlov, sciatique

(Ibuprofen, Advil) provided relief. On physical examination, the Straight Leg Raise test² (at approximately 30° of hip flexion), the Hibb's test, and the Yeoman's test each elicited pain and paresthesia down the patient's left leg; the Double Leg Raise, seated Kemp's, and Nachlas' tests were negative. Lower limb neurological examination (including motor, reflex, sensory, and vibratory testing) was normal.

Lumbar spine magnetic resonance imaging (MRI) had been performed at a hospital one month earlier. In the attending radiologist's report, there was a left-sided

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The patient has provided written consent to having his personal health information, including diagnostic images, published.
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Figure 1. Left parasagittal T2-weighted MR image reveals a high signal lobulated mass within an enlarged left L4-5 neural foramen. The mass is compressing and displacing the L4 nerve root into the undersurface of the L4 pedicle (arrow).

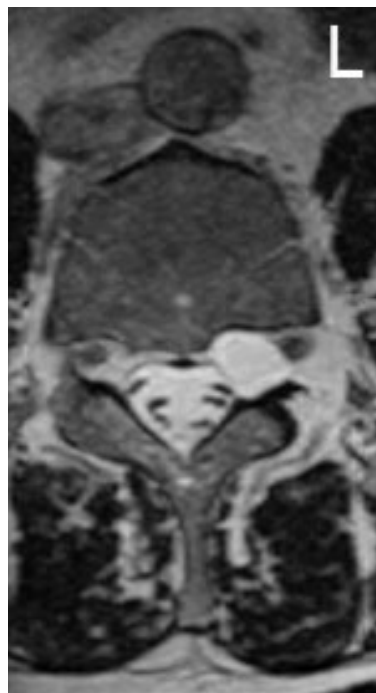


Figure 2. An axial T2-weighted MR image shows the high signal, fluid-filled, lobulated mass resulting in a focal scalloped erosion of the left posterolateral aspect of the L4 vertebral body and marked lateral displacement of the left exiting L4 nerve root. The mass abuts and minimally compresses the thecal sac adjacent to the descending L5 and S1 nerve roots.

perineural/arachnoid cyst (measuring 1.1 cm) noted at the L4-5 level in addition to degenerative changes at L4-5 and L5-S1. However, no clinical correlation or recommendation for further investigations or treatment was given. Copies of the patient's MR images were subsequently obtained and these clearly revealed that the perineural cyst was displacing the left L4 nerve root and had resulted in posterior vertebral body scalloping and enlargement of the left L4-5 neural foramen (Figures 1 and 2). Based on these findings, the patient was diagnosed with sciatic neuralgia resulting from a left-sided L4-5 perineural cyst.

Perineural cysts were first described by Tarlov in 1938.³ Tarlov cysts are rare and arise from the perineurium membrane surrounding the spinal nerve root, near the dorsal root ganglion. Most are asymptomatic and are an incidental finding on routine spinal imaging. Symptomatic cases are typically treated by surgical excision, needle aspiration, or steroid injection, although some cases resolve spontaneously.^{4,6} The key imaging features and differential diagnoses for Tarlov cysts are listed in Table 1.

The patient in this case was referred back to his primary

care physician with a recommendation for neurosurgical consultation. A conservative approach was taken, however, and after four months the patient's sciatic symptoms spontaneously resolved. Because a second MRI was not obtained, it is possible that the patient's imaging findings were coincidental to his clinical symptoms. Regardless,

Table 1.

Key imaging features and differential diagnoses of Tarlov cysts.

Key imaging features
<ul style="list-style-type: none"> • Circular or ovoid lobulated, fluid-filled (CSF) mass within the spinal canal or neural foramen • Hyperintense on fluid-sensitive (T2-weighted) MR images • May exhibit stenosis with nerve root and/or thecal sac compression • May result in adjacent erosion of pedicles or vertebral bodies • May accompany adjacent disc herniation
Differential diagnoses: facet joint synovial cyst, intraspinal neoplasms

CSF = cerebrospinal fluid

his improvements were still maintained at follow-up (via telephone) one year later. For more information on Tarlov cysts visit Radiopaedia.org.⁷

Key Messages

- Perineural (Tarlov) cysts are rare and are usually asymptomatic
- Symptomatic cases can be treated surgically although some cases resolve spontaneously

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