

SYMPTOMATIC SACRAL TARLOV CYST: Case Report

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SUMMARY

Tarlov cysts are perineural cysts that usually arise in the extradural components of sacral or coccygeal nerve roots at the junction of the dorsal root ganglion. On rare occasions Tarlov cysts may be symptomatic. A case of symptomatic sacral Tarlov cyst is reported and appropriate patient selection for microsurgical treatment is discussed.

Key Words: Microsurgical Treatment, Tarlov Cyst

ÖZET

Semptomatik Tarlov Kisti: Olgu Sunumu

Tarlov kistleri, dorsal kök ganglionunun genellikle sacral veya koksigeal sinir köklerinin ekstradural komponentleriyle birleşme yerinde ortaya çıkan perinöral kistlerdir. Nadiren Tarlov kistleri semptomatik olurlar. Burada semptomatik bir sakral Tarlov kisti vakası sunulmuş ve mikrocerrahi tedavi için uygun hasta seçimi tartışılmıştır.

Anahtar Kelimeler: Mikrocerrahi Tedavi, Tarlov Kisti

Tarlov cysts are perineural cysts usually arising in the extradural components of sacral or coccygeal nerve roots at the junction of the dorsal root ganglion as described first by Tarlov in 1938. Sacral perineural cysts are usually found incidentally during imaging modalities or at autopsy (1). However, on rare occasions Tarlov cysts may be symptomatic and appropriate surgical treatment should be performed according to appropriate patient selection. The authors reported a case of symptomatic sacral perineural cyst diagnosed with magnetic resonance imaging (MRI) and microsurgical treatment performed by fenestration and imbrication of the cyst.

Case Report

A 20-year-old man presented with burning pain radiating from buttock to lateral thigh and left leg and bladder disfunction. The pain was worsening when standing upright or lying supine and was relieving at lying prone position. He has

also experienced increased pain when valsalva maneuver performed. He did not complain weakness of his legs. The patient was significantly incapacitated by these symptoms. Medical treatment by analgesic drugs were used before admission to our department but the patient has not revealed any pain relief.

The diagnosis of sacral perineural cysts were performed by computed tomography and MRI (Figure 1, 2). Preoperative urodynamic studies were performed and results were abnormal. According to the onset of bladder disfunction and exacerbation of radiculopathy with postural changes and valsalva maneuver we decided to perform surgery.

A sacral laminectomy was performed which revealed the cyst occupying the hollow of the sacrum. Microsurgical cyst fenestration and cyst imbrication was performed under operation microscope (Fig 3, 4). After surgery radicular pain and bladder control improved markedly. There

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Treatment options of the Tarlov cysts are decompressive sacral laminectomy, cyst and nerve root resection, incision and drainage of the cyst with imbrication of the redundant nerve root sheath and lumbar cerebrospinal fluid drainage with lumboperitoneal shunting procedure, and cyst-subarachnoid shunt application (4,6-13). Appropriate patient selection is the key point of the surgical treatment. Medical treatment including analgesic and anti-inflammatory medication and physical therapy is the first step of all treatment. However, the onset of incontinence, bladder disfunction and the onset of impotence invites surgical intervention. Simple decompression has proven not to be successful. Cyst and nerve root resection often result in a neurological deficit (7). Praveen et al. observed that patients who experienced preoperative exacerbation of their radiculopathy with both postural changes and valsalva maneuvers were most likely to benefit from microsurgery (4). In our case according to bladder disfunction and radiculopathy with both postural changes and valsalva maneuvers we have chosen microsurgical treatment with cyst fenestration and imbrication. To prevent CSF leakage muscle grafts were placed epidurally over the fenestrated

cyst. But we did not use any lumbar subarachnoid drain or perform lumbar puncture. However, if CSF leakage occurs lumbar subarachnoid drainage should be useful (4). The symptoms of the Tarlov cyst may arise from the compression of the involved root due to the intracystic hyperpressure. It has been hypothesized that the cyst neck serves as a valve and according to the systolic pulsation and patient's postural changes CSF enters the cyst but could not exit. When the cyst fills, the pain occurs; when the cyst deflates the pain reliefs (2, 14). So that the treatment modalities are based on this valve hypothesis. Incision and drainage of the cyst with imbrication of the redundant nerve reestablishes the cyst walls and the symptoms may resolve due to the disappearing of the intracystic hyperpressure. Lumbar cerebrospinal fluid drainage with lumboperitoneal shunting procedure and cyst subarachnoid shunt application are new treatment options. In multiple Tarlov cysts cases these treatment options should be useful.

In conclusion surgical treatment of the Tarlov cysts should be recommended to appropriately selected symptomatic cases.

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