Giant Symptomatic Bilateral Sacral Tarlov Cysts – A Case Report

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ABSTRACT

Tarlov or perineural cysts are nerve root cysts that are predominantly regarded as asymptomatic incidental feature of CT and MRI. However, as indicated in our case report, it may cause a variety of neurologic and urologic symptoms along with back pain. We report here a case of a 27-year-old female who presented with bilateral radiculopathy for six months. Patient underwent imbrication with laminectomy procedure and had an uneventful recovery, suggesting that such cysts and the presence of associated radicular symptoms strongly correlate with excellent outcome after surgery.

Keywords: Perineural cyst; Radiculopathy; Laminectomy

INTRODUCTION

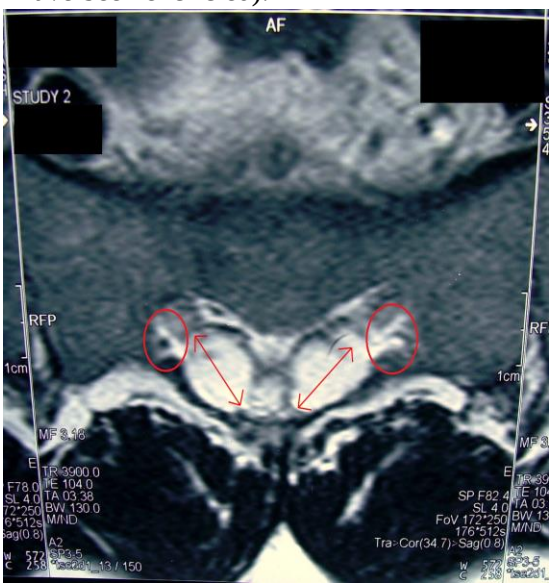
Sacral perineural cyst was first described as an incidental autopsy finding by Tarlov in 1938 [1]. Tarlov or perineural cysts are nerve root cysts found most commonly at the sacral spine level arising between covering layers of the perineurium near the dorsal root ganglion [2]. Paulsen reported the incidence of Tarlov cysts as 4.6% in back pain patients where a consecutive 500 MRIs were considered of which 20% patients were symptomatic [3].

Fewer than 100 cases of symptomatic Tarlov cyst have been described in literature but this case is unique in the sense that the cysts were gigantic and involved both S2 nerve roots causing bilateral S2 radiculopathy, which has been associated with higher morbidity [4]. There is only one case of bilateral single level Tarlov cysts in reported literature [5].

CASE REPORT

A 27-year-old female presented with bilateral radiculopathy involving both S2 dermatomes with more pain on the right side for six months prior to presentation to our clinic. She had difficulty in walking due to pain and could walk only with assistance. On clinical examination, straight leg raise was restricted to 30 degrees with reflexes being (++). Her sensory nervous system examination was normal as was her anal and urinary sphincter tone. Her laboratory studies were normal and she was negative for hepatitis B antigen and hepatitis C antibodies. MRI of the lumbosacral spine showed bilateral giant S2 Tarlov cysts (Figures 1 and 2). She was on maximum tolerable dose of analgesics but remained symptomatic because of intractable radiculopathy. Patient underwent imbrication with laminectomy procedure. Bilateral limited S2 laminectomy was done in lateral position. Both

Figure 1: Giant bilateral sacral Tarlov cysts (cysts have been marked along their span with arrows while the associated nerve roots have been encircled).



cysts were exposed, and their attachment to nerve roots was confirmed. Cyst wall fenestration was done bilaterally and hampered muscle grafts from paraspinal muscle were laid over the cysts to cover them completely. After confirming no CSF leak by doing repeated Valsalva maneuver under general anesthesia under the supervision of the anesthetist, layered closure was done. Patient had uneventful recovery and was discharged from hospital after three days. Patient had a remarkable improvement in pain. Analgesics were gradually weaned off over following two weeks. On follow-up, patient was able to walk unassisted and was not using any analgesics. Last follow up was at one year.

DISCUSSION

Tarlov cysts are predominantly regarded as asymptomatic incidental feature of CT and MRI scans of the spine with a prevalence of 4.6% [3]. They are most commonly found during the 3rd or 4th decades of life as was seen in this patient. Our case report, as well as currently published literature, indicates that a Tarlov cyst may cause a variety of neurologic and urologic symptoms [6]. The presentation in our case was bilateral S2 radiculopathy with no loss of sphincter tone. A major role has been ascribed to the hydrostatic and pulsatile forces of the CSF for the symptomatology of sacral nerve root cysts [7]. The treatment options include microsurgical cyst fenestration and imbrication, partial cyst wall resection, myofascial flap repair, and cysto-subarachnoid shunt and microsurgical cyst fenestration with imbrication with laminectomy [8, 9, 10, 11, 12]. Among these, imbrication with laminectomy has shown the most promising results. A newer technique, which involves actively identifying the cyst aperture and closing it to prevent recurrence, has been suggested. However, the results of this technique were published after our patient had undergone surgery [13]. CT guided percutaneous aspiration can be a useful and important diagnostic and prognostic procedure prior to definitive operative treatment [14], but as the clinical picture correlated well with the MRI findings and the rest of the spine showed no abnormality, this diagnostic step was deemed unnecessary. Follow up CT/MRI has not been done as the patient is asymptomatic and the utility of such scans has not been proven.

CONCLUSION

Giant sacral Tarlov cyst and the presence of ass-

Figure 2: MR myelogram showing giant bilateral sacral Tarlov cysts (cysts have been encircled).

ociated radicular symptoms strongly correlate with excellent outcome after surgery**.**

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