ABSTRACT
Radiculopathy is one of the commonest complaints seen in the pain clinics and herniated intervertebral disk is the cause in most of the cases. Perineural cysts (or Tarlov cysts) are mostly seen in the sacral region and their existence in the lumbar region is extremely rare. Though most of the perineural cysts are asymptomatic, they can produce symptoms ranging from chronic low backache to severe neurologic deficits including cauda equina syndrome. Easily detected by magnetic resonance imaging (MRI), these perineural cysts have to be surgically removed when symptomatic.

Keywords: Perineural cyst, Radiculopathy, Tarlov cyst.

How to cite this article: Kulkarni R. A Case of Symptomatic Lumbar Perineural Cyst. J Recent Adv Pain 2015;1(2):95-96.

INTRODUCTION
Although herniated disks are the commonest cause for lumbar radiculopathy, it can be produced by number of other causes like osteophytes, infection, tumor, trauma, meningeal cysts, etc.1 Perineural cyst (Tarlov cyst) in the lumbar region is a rare entity causing radicular symptoms. We present here a rare case of lumbar perineural cyst causing radicular symptoms which was detected in the magnetic resonance imaging (MRI) and confirmed by diagnostic nerve root block.

CASE REPORT
A 35-year-old female patient presented with 6 months history of low backache radiating to right lower limb along the lateral aspect of thigh, lateral leg and dorsum of the foot up to the great toe. Pain was aggravated during walking and relieved partially during sitting and lying down. Patient complained of tingling, ants crawling in the area of the pain. She also complained of decreased sensation in the area of pain. The sensory loss was about 40% compared to the opposite side and was nonprogressive. There was no motor weakness, bowel or bladder incontinence. Pain score was 7 out of 10 on numerical rating scale. Straight leg raising test (SLRT) was positive at 70°. Patient was on pregabalin 75 mg twice a day since 6 months and was having partial relief.

A working diagnosis of right side L5 radiculopathy was made and MRI scan of the lumbosacral spine was ordered to confirm the diagnosis. Magnetic resonance imaging scan revealed right-sided perineural Tarlov cyst at L4 to 5 level. A diagnostic L5 root block was performed under fluoroscopy which resulted in near total pain relief thus, confirming the diagnosis. The patient was then referred to neurosurgeon for surgical excision of the cyst.

DISCUSSION
Lumbar disk herniations are by far the commonest lesions causing radicular pain or radiculopathy. They account for 98% of radicular symptoms. Multiple other causes account for the rest 2% of cases. They include vertebral causes (spinal stenosis, spondylolisthesis, osteophytes,) benign and malignant tumors, meningeal cysts, infection, etc.1 Perineural cyst is considered as a rare cause of radiculopathy. Perineural cyst was first described by Isadore M Tarlov in 1938 as an incidental finding during autopsy.2,3 The incidence of these cysts is 4.6% and only 20% of them are symptomatic.4 These cysts are commonly found in sacral region with a female predominance.5 Clinical presentation is more common in 3rd and 4th decade.5 Histologically, these cysts are lined by an outer layer of arachnoid or perineurium, inner layer of pia or endoneurium with ganglion cells or nerve fibers in the wall. The cyst communicates with sub arachnoid space and contains cerebrospinal fluid (CSF).5 The Tarlov cysts may or may not have one way valve. The cysts with one way valve allow the CSF to enter the cyst and cause progressive increase in cyst size causing compressive symptoms.4

These cysts can present with various features including nerve root compression (most common are S2 and S3) causing radicular pain, motor weakness, impotence, perianal pain, cauda equina syndrome,6,7 depending on their size and location. They can also produce bony erosions and fractures.4 They may also present as persistent genital arousal disorder in females. Perineural cysts may also
clinically present with symptoms of interstitial cystitis or adnexal mass. Infertility\(^2\) and retrograde ejaculation can also be caused secondary to compressive symptoms.\(^2\) Rupture of these cysts rarely may cause embolism and spontaneous intracranial hypotension.\(^5\) Our patient presented with features of L5 radiculopathy which is a rare presentation as most of the Tarlov cysts are found in sacral region and cause sacral radicular symptoms. However, this presentation resembled the one published by Gunduz et al\(^6\) where the patient had low back pain and left leg pain. There is no general consensus regarding treatment of perineural cysts. Both percutaneous intervention and surgical treatment have been tried. It is still not clear that which is the most appropriate treatment.\(^6\) Simple epidural steroid injections have given long lasting symptomatic relief to these patients and even resolution of the cyst on post-treatment MRI although the mechanism of the epidural steroid on these cysts is unknown.\(^9,10\) Surgical treatment has been tried for the cysts causing serious motor deficits and the techniques included posterior laminectomy, cyst shunting, cautery of cyst wall, cyst fenestration and imbrications.\(^2,10\) Computed tomography (CT) guided aspiration of the cyst and aspiration along with fibrin glue application have also been recommended with long-term pain relief.\(^4\) But, there are also reports of failure of the CT guided aspiration and complication like aseptic meningitis with fibrin glue application.\(^2\)

In our case, we did not try epidural steroid injection although few case reports have shown success because there is no evidence in the literature regarding the mechanism of action of the deposteroid on the cyst in causing pain relief and the regression of the cyst. In addition, epidural steroid is injected under fluoroscopic guidance where the cyst cannot be visualized, there is always a chance of accidentally injecting the steroid solution in to the cyst which will cause worsening of the symptoms. Thus, we decided to refer the case to a neurosurgeon for surgical excision of the cyst.

**CONCLUSION**

Since most of the perineural cysts are rare and asymptomatic, high degree of suspicion is required to conclude them as pain generators when detected in MRI. The presenting symptoms of the patient and the location of the perineural cyst have to be meticulously correlated to diagnose perineural cyst as pain generator. Diagnostic local anesthetic block, which is an important weapon of pain physician helps in confirming the clinical diagnosis. These cysts have to be removed surgically when symptomatic for permanent pain relief.

**REFERENCES**