INTRODUCTION
Extradural spinal cyst is a rare cause of compression myelopathy. It is usually solitary and its typical location is posterior to the spinal cord. Arachnoid cysts can either be idiopathic or associated with trauma or other inflammatory insults.1 Extradural arachnoid cysts develop from arachnoid herniating through a small dural defect. The cysts have a pedicle in communication with the spinal sub-arachnoid space and, because of their origin, contain CSF.2 A unidirectional valve might let the fluid in, but not out of cyst. If they enlarge, they usually present with progressive signs and symptoms of neural compression.

We present a rare case of extradural arachnoid cyst in dorsal spine of a child where no dural communication was found.

CASE REPORT
A 9 years old boy presented with history of backache, gait ataxia, progressive weakness of lower limbs for last 6 months and urinary incontinence for 3 months. There was no history of trauma, fever, surgery or neural tube defects. Clinical examination revealed a healthy looking child with stable vital signs, no sensory loss with power of 4/5 in right leg and +4/5 in left leg. Deep tendon reflexes were exaggerated in both lower limbs with absent ankle clonus and bilaterally extensor plantars. Examination of spine did not elicit any tenderness with normal range of motion.

MRI of dorsolumbar spine revealed an elongated extradural abnormal signal intensity area at T4-8 vertebrae level, appearing hypointense in T1 and hyperintense on T2 weighted images with no contrast enhancement on post gadolinium scan. It was found to compress spinal cord anteriorly against vertebral body. No dural communication was identified on magnetic resonance imaging myelography.

Posterior midline approach and T4-8 laminectomy was done. A cystic mass was found dorsal to dural sac. The cyst was incised yielding a colourless CSF like fluid. The cyst wall could be separated easily from theca and then completely removed. No dural defect was found in theca or adjacent to nerve root sleeve.

Postoperatively, patient had uneventful recovery and power of lower limbs improved to 5/5 with regain of urinary control when catheter was removed on third postoperative day. Histopathology reported cyst wall lined by flattened to cuboidal cells supported by collagen which was consistent with an arachnoid cyst.

DISCUSSION
Extradural arachnoid cysts in the spine are rare and are seldom a cause of spinal cord compression. They are thought to arise from congenital defects in the dura mater, and they almost always communicate with the intrathecal subarachnoid space through a small defect in the dura. These cysts most commonly occur in the middle to lower thoracic spine (65%) but also have been reported in the lumbar and lumbosacral (13%), thoracolumbar (12%), sacral (7%), and cervical regions (3%).3 The cause of these cysts has not been determined definitively, although they most probably have a congenital origin. Some may be acquired from trauma, infection, or inflammation.

Since backache in a child is considered not to be significant, it was only after the development of gait instability, neurological deficit and urinary incontinence that he was referred to neurosurgery outpatient. CT myelography, cinematic magnetic resonance imaging (cine-MRI) and magnetic resonance imaging myelo-
igraphy can help in identifying the dural defect preoperatively.\textsuperscript{4,5} In the present case magnetic resonance imaging myelography did not reveal any communication of arachnoid cyst. Peroperatively, an intact sac was found with no dural defect which is a rare occurrence.

The mainstay of treatment in patients with symptomatic neurological deterioration from spinal extradural arachnoid cysts is complete excision of the cyst, followed by obliteration of the communicating pedicle and water tight repair of the dural defect to eradicate the ball-valve mechanism.\textsuperscript{6} Although surgery is the preferred way of management, there are reported cases of conservative management of patients with no neurological deficit.\textsuperscript{7} In order to save the child from a long segment laminectomy or T-saw laminoplasty,\textsuperscript{8} a new minimally invasive technique of cystotheostomy has been devised by Dev and colleagues, where a single level laminectomy was performed under local anaesthesia, and the cyst was communicated to thecal sac by making an interconnecting stoma.\textsuperscript{9} Minimally invasive surgical techniques have also met with some success. Neo \textit{et al.} reported that they successfully treated a giant spinal extradural arachnoid cyst by selectively closing the dural defect with clips.\textsuperscript{10} We opted for laminectomy and excision of cyst. The boy in this case was developing progressive myelopathy which did not warrant any delay in operative management.

Liu \textit{et al.} presented a similar case where no dural defect was found and as in this case, child had a complete neurological postoperative recovery.\textsuperscript{11} It is thus concluded that although spinal extradural arachnoid cyst is a rare occurrence, backache along with focal neurological deficit in a child needs to be evaluated clinically and radiologically. A surgically treatable lesion should not be delayed as excision of cyst leads to a favourable outcome.

\section*{REFERENCES}


