Intrasacral meningocele is an unusual congenital lesion. It is an intrathecal cystic formation arising as a protrusion of the arachnoid through a congenitally weak place in the dura mater. We report a case of a 12-year-old child with chronic pain with an intrasacral meningocele identified on magnetic resonance imaging.

**Keywords:** Intrasacral, meningocele, MRI

### INTRODUCTION

Intrasacral meningoceles are rare cystic lesions that can cause focal compression in the bony sacral canal. They are intrathecal cystic formations arising as protrusions of the arachnoid through a congenitally weak place in the dura mater.[1-2] Their mechanisms are poorly understood, but most intrasacral meningoceles are extradural cysts, which are caused by herniation of arachnoid through a dural defect at the lower end of the thecal sac.[3] The sac dilates with time and causes local erosion of the sacrum and lower lumbar vertebral.[2] We report a case of a 12-year-old child with chronic pain diagnosed with an intrasacral meningocele identified on magnetic resonance imaging (MRI).

### CASE REPORT

A 12-year-old child presented to the hospital with a 2-month history of bilateral knee and ankle pains associated with muscle weakness, needing wheelchair and crutches. He had no history suggestive of any bladder or bowel involvement and did not complain of any sensory disturbances. He had presented with flu-like symptoms before onset of these symptoms and was discharged home on painkillers.

Clinical examination was essentially normal with no evidence of any neurological abnormalities or arthritis. His power was grade 4/5 in both lower limbs with no evidence of any spinal tenderness. There was no evidence of any spinal dysraphism on clinical examination. Deep tendon reflexes were normal with down-going plantar reflex. His blood showed normal inflammatory markers with Vitamin D deficiency, which was treated with high-dose Vitamin D supplements. He had an MRI spine [Figure 1], which showed intrasacral meningocele. He had multidisciplinary input involving the pediatric physiotherapists, occupational therapists, and psychologists with good improvement in his symptoms. He was managed with regular analgesics and gabapentin. His pain symptoms and mobility have significantly improved. He was reviewed by the neurosurgeons who are following him up in the clinic.

### DISCUSSION

The term “intrasacral meningocele” was introduced by Enderle in 1932.[4] It was used to describe a sac of fibrous tissue similar to dura matter, which lied within an enlarged sacral spinal canal. This sac was attached to the lower end of the dural sac by a pedicle that usually allowed the cerebrospinal fluid to flow from the subarachnoid space into the meningocele.[5]

In 1988, Nabor et al.[6] classified spinal meningocele cysts into three categories: Type I which were extradural cysts without any spinal nerve root fibers; Type II which described extradural cysts with spinal nerve root fibers; and Type III which were intradural cysts. Intrasacral meningoceles would therefore be classified as Type I spinal meningocele as per the above classification.

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Patients with intrasacral meningoceles usually present with pain and alteration in their bowel and bladder habits. An extensive review into these lesions was carried out in 1990; this showed that 69% of patients presented with lower back pain and pain in the buttocks and legs. Nearly 56% of these patients had associated weakness in the lower limbs and 44% had altered bowel and bladder habits.

MRI is more sensitive and specific than computerized tomography in the detection of meningoceles. MRI scan of intrasacral meningocele shows an extradural cyst with smooth contours present in the sacral spinal canal with no neural elements noted inside the cyst.

Surgical treatment is not always the most appropriate mode of management in a patient with intrasacral meningocele. Surgery is indicated when there are worsening symptoms or when imaging shows an increase in the size of the cyst. Surgery for an intrasacral meningocele is performed if the child has surgery for a related spinal disorder such as cord tethering. Surgical ligation and obliteration of the cyst is the procedure of choice to treat this disorder.

Conclusions

Intrasacral meningoceles are rare lesions that may result from a congenital dural weakness leading to protrusion of the arachnoid. They may present in childhood with symptoms such as low back pain and bowel and bladder symptoms or may be detected incidentally. We recommend that all children with chronic back and lower limb pain should have MRI of the spine to rule out occult intrasacral meningoceles.

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Conflicts of interest
There are no conflicts of interest.

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Figure 1: Magnetic resonance imaging of the spine depicting the intrasacral meningocele