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Giant dorsal sacral meningocele in a child

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ABSTRACT

Sacral meningoceles are uncommon congenital lesions, usually described in the anterior or lateral position, and they typically are asymptomatic [1,7]. A nine-years male child presented with a progressively increasing swelling over the lumbosacral region since birth.

Keywords
sacral meningocele,
lipomyelomeningocele.
MRI,
meningocele,
sacral mass

Sacral meningoceles are uncommon congenital lesions, usually described in anterior or lateral position and are typically asymptomatic.[1-7] A nine year male child presented with a progressively increasing swelling over lumbo-sacral region since birth. There was no history of any bowel or bladder dysfunctions. Motor and sensory examination was normal. Planters were flexor. Rectal tone was normal. Gait was normal. Results of her sensory, rectal tone and lower limbs motor exams were within normal limits. There were no abnormal skin lesions, skeletal deformities, abnormal sinus or swellings. A physical examination of the patient showed a soft, 4 x 4-cm fluctuant and non-pulsatile mass over sacral region, completely with normal skin without any stigmata. The transillumination test was positive. Routine blood investigations were normal. Magnetic resonance imaging (MRI) of the lumbo-sacral spine showed a large, well-defined cystic over sacrum without any no evidence of internal echoes, solid component or septae (Figure-1 and 2). There was evidence of communication between the cyst and the spinal canal. The patient underwent surgical excision of the swelling and repair of the sac. The large cyst was entered and found to contain clear CSF in a terminal continuation of the spinal subarachnoid space. There was no neural tissue in the sac. And there was no evidence of tethering. Postoperatively, the child had normal neurological and urological function. CT of the brain did not show any evidence of hydrocephalus. He developed CSF leak in post-operative and the defect was repaired with pedicel graft.

A meningocele a developmental defect in the dura resulting in an outpouching of leptomeninges through defect covered with only a layer of skin. [4] Most of the sacral meningoceles are asymptomatic with a soft tissue mass; they produce clinical symptoms depending on their

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proximity to the spinal cord and nerve roots (e.g. unexplained radiating or low back pain, or sensory or motor deficits, atypical bowel dysfunction [1-4, 8, 9] The differential diagnosis for the mass lesions in children in sacro-coccygeal area includes meningocele, myelomeningocele, myelocystocele, teratoma, lipoma, hamartoma, lymphangioma, hemangioma, chordoma, and ependymoma. [10-15] MRI is the investigation of choice as it will better delineate the details of the sac and its contents. Also it will help to know the extent of the spinal cord and position of the nerve roots. [3] Radiographs may reveal erosion and widening in the sacral bone, [9] scalloping of the pedicles, laminae and vertebral bodies adjacent to the meningocele resulting in an enlargement of the spinal canal. [16, 17 18]Indications for surgical repair include clinically symptomatic patients [1-3, 8, 19] or if the lesions located in an area where it has greater risk of mechanical trauma or rupture (as in the present case).

Figure 1. MRI of the lumbo-sacral spine T1W, FLAIR and T2W sagittal images showing large, well-defined cystic lesion over sacrum (signal intensity similar to cerebrospinal fluid) without any no evidence of internal echoes, solid component or septae.

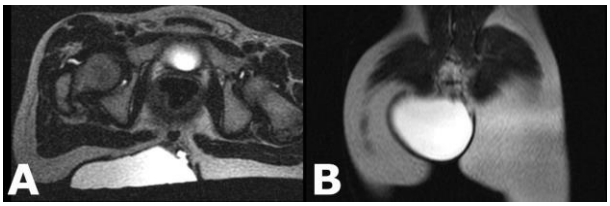

Figure 2. MRI of the lumbo-sacral spine T2W axial images showing large, well-defined cystic lesion over sacrum (signal intensity similar to cerebrospinal fluid).

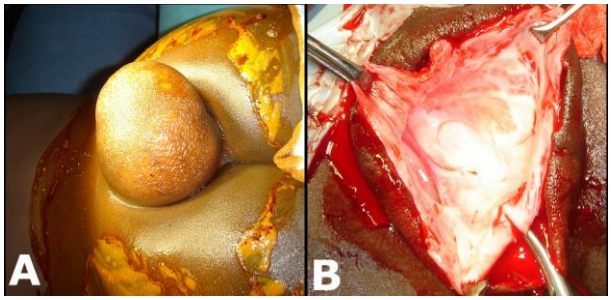

Figure 3. Intraoperative images showing excision and repair of the meningocele.

References

1. Nishio Y, Hamada H, Kurimoto M, Hayashi N, Hirashima Y, Endo S. A case of occult intrasacral meningocele presented with atypical bowel symptoms. Child's nervous system : ChNS : official journal of the International Society for Pediatric Neurosurgery 2004;20:65-67.
2. Turgut M, Akyüz O, Unsal A. Occult intrasacral meningocele: case report and review of the literature. Zentralblatt fur Neurochirurgie 2007;68:34-37.
3. Naoumis D, Gkiatas K, Kararizos G, Mitsonis C, Kararizou E. Sacral meningocele in a military pilot, presenting during flight. Aviation, space, and environmental medicine 2010;81:141-143.
4. Shetty D, Lakhkar B. Lateral sacral lipomyelomeningocele: a rare anomaly. Neurology India 2002;50:204.
5. Lee KS, Gower DJ, McWhorter JM, Albertson DA. The role of MR imaging in the diagnosis and treatment of anterior sacral meningocele. Report of two cases. Journal of neurosurgery 1988;69:628-631.
6. Erkulvrawatr S, El Gammal T, Hawkins J, Green JB, Srinivasan G. Intrathoracic meningoceles and neurofibromatosis. Archives of neurology 1979;36:557-559.
7. Seddighi A, Seddighi AS. Lateral sacral meningocele presenting as a gluteal mass: a case report. Journal of medical case reports 2010;4:81.
8. Shiau JSC, Raden M, Juliano JE. Sacral intraspinal meningocele in a patient presenting with abdominal pain. Case report. Journal of neurosurgery 2007;107:53-56.
9. Kiliçkesmez O, Barut Y, Tasdemiroglu E. Expanding occult intrasacral meningocele associated with diastematomyelia and multiple vertebral anomalies. Case report. Journal of neurosurgery 2004;101:108-111.
10. Altman RP, Randolph JG, Lilly JR. Sacrococcygeal teratoma: American Academy of Pediatrics Surgical Section Survey-1973. Journal of pediatric surgery 1974;9:389-398.

11. Gupta DK, Mahapatra AK. Terminal myelocystoceles: a series of 17 cases. Journal of neurosurgery 2005;103:344-352.
12. Yu JA, Sohaey R, Kennedy AM, Selden NR. Terminal myelocystocele and sacrococcygeal teratoma: a comparison of fetal ultrasound presentation and perinatal risk. AJNR American journal of neuroradiology 2007;28:1058-1060.
13. Ein SH, Adeyemi SD, Mancer K. Benign sacrococcygeal teratomas in infants and children: a 25 year review. Annals of surgery 1980;191:382-384.
14. Güvenç BH, Etus V, Muezzinoglu B. Lumbar teratoma presenting intradural and extramedullary extension in a neonate. The Spine Journal 2006;6:90-93.
15. Gross SJ, Benzie RJ, Sermer M, Skidmore MB, Wilson SR. Sacrococcygeal teratoma: prenatal diagnosis and management. American journal of obstetrics and gynecology 1987;156:393-396.
16. Dubowitz V, Lorber J, Zachary Rb. Lipoma Of The Cauda Equina. Archives of disease in childhood 1965;40:207-213.
17. Heckly A, Carsin-Nicol B, Poulain P, Hamlat A. Diagnosis-related pitfall of a lateral sacral cyst. Case report. Journal of neurosurgery Spine 2005;2:72-74.
18. Philip N, Andrac L, Moncla A, et al. Multiple lateral meningoceles, distinctive facies and skeletal anomalies: a new case of Lehman syndrome. Clinical dysmorphology 1995;4:347-351.
19. Rengachary SS, O'Boynick P, Karlin CA, Batnitzky S, Price H. Intrasacral extradural communicating arachnoid cyst: cases report. Neurosurgery 1981;8:236-240.