Anterior sacral myelomeningocele case reports

2022

A 13-year-old girl presented with a history of constipation with vague, dull aching intermittent episodes of lower abdominal pain for 2 years. There was no other complaint, and the general examination was normal. Magnetic resonance imaging (MRI) of the lumbosacral spine showed a large anterior sacral meningocele measuring 9.4 × 6.8 × 6.8 cm with the widening of the sacral foramina at S1–S2 level, and also a partial fusion of L5–S1 and S1–S2 vertebra and left hemisacral agenesis along with low-lying thick filum at L4. Further workup revealed an absent left kidney and bicornuate uterus. She underwent surgery for excision of the anterior sacral meningocele through S1-S2 laminectomy, excision of the meningocele sac, and dural repair with fat graft along with untethering of the filum under intraoperative neuromonitoring. Postoperatively she improved in her bowel symptoms. Four months later, she underwent left salpingo-hemihysterectomy for left hydrosalpinx and left hematometra by the Paediatric surgery team and made a satisfactory recovery. [1].

2020

A 2-month-old full-term female presented with a large anterior sacral meningomyelocele resulting in transient obstructive uropathy with bilateral hydronephrosis and acute kidney injury. After initial bladder decompression and surgical resection of the meningomyelocele, there was a spontaneous resolution of bladder function confirmed with urodynamics. Anterior spinal meningomyelocele (ASM) is a rare neural tube defect that may present with urinary dysfunction secondary to compression of the bladder and sacral nerve roots or congenital defects to the bladder nervous supply. Obstructive uropathy due to ASM may spontaneously resolve after surgical resection [2].

2018

44-year-old, manifested functional digestive and urinary disorders caused by a giant anterior sacral meningocele. The ligation of the neck of the cyst and aspiration of the liquid inside in full through a posterior partial approach permits a complete collapse of the cyst with an instantly satisfactory clinical outcome [3].

2011

A successfully managed young child with anterior sacral myelomeningocele associated with rib and vertebral defects [4]. An open anterior transperitoneal abdominal approach was used in our case as the large ASM was reaching up to the umbilicus and had a large neck. Anticipated difficulty in managing the large ASM, excellent exposure available, and previous experience of this approach guided in preferring this approach. The limitation of this procedure is the management of caudal spinal cord

anomalies as deep pelvic dissection is difficult [5) 6)].

2006

A 16-year-old female patient with a giant nonsyndromic anterior sacral meningocele that we successfully treated using an open anterior approach. We discuss the treatment options and present a brief review of the literature.

Conclusions: Although the posterior approach remains the treatment of choice for most lesions, we believe that the anterior laparotomy provides excellent exposure and is a safe alternative approach for the treatment of selected lesions. Patients with these lesions should be cared for by a multidisciplinary team [7)].

2005

A 16-year-old female patient has a large anterior sacral meningocele. She underwent surgical treatment by the abdominal approach, and the meningocele sac was excised. They presented the clinical and radiological features of ourthe patient and discussed them with reference to the literature [8)].

2004

Anterior sacral meningocoele with sacrococcygeal teratoma is a rare entity. The cystic mass arising from the anterior sacral and coccygeal defect lies in the retrorectal space between the rectum and sacrum. It produces a variety of symptoms depending on its size and contents and constitutes a diagnostic problem. Such a rare association of two pathologies is presented, with a review of the literature, in an infant who had an anterior meningocele with sacrococcygeal teratoma. Both pathologies were surgically corrected individually, about a month apart [9)].

2003

A 15-year-old girl with a long clinical history of constipation and sporadic cystitis. Radiological examinations showed progressive enlargement of a presacral lipomeningocele, which grew to 12×14 cm. A posterior sagittal approach was performed; the stalk was ligated, the sac totally excised and a small associated tumor removed. No intra-/post-operative complications were observed.

The posterior sagittal approach is an easy and safe surgical technique for the treatment of ASM, as it allows complete isolation of the lesion and the removal of associated tumors without significant morbidity [10)]

1997

A case of anterior sacral meningocele successfully excised using the posterior sagittal approach [11].

1988

A case presentation of a young woman who presented with amenorrhea. On physical examination, a large presacral mass was found. Ultrasonography revealed a large cystic structure. Radiography of the pelvis demonstrated a sacral deformity or “scimitar sign” that is pathognomonic for anterior sacral meningocele. The diagnosis was confirmed by computed tomography with myelography enhancement [12].

Bautista Casasnovas A, Varela Cives R, Castro-Gago M. Meningocele sacro anterior [Anterior sacral meningocele]. An Esp Pediatr. 1988 Apr;28(4):353-5. Spanish. PMID: 3041887.

1978

A 48-year-old man, had two functioning rectae, one ending in its normal anatomical topography and the functioning but nor functional supernumerary rectum exteriorized in the left gluteal region through a rudimentary anus. Histological studies demonstrated a rudimentary sphincter in the ectopic anus, and focal carcinomatous transformation of one of the four adenomatous polyps, encountered protruding through the normally located anus. The anal anomaly was associated with partial agenesis of the sacrum, absence of coccyx, sacral anterior meningomyelocele, and hypoplasia of the twelve right ribs. The frequency of the anomaly, its histology, and embryology, as well as its classification within the malformations of the terminal gut, were revised in the medical bibliography. It is concluded that this type of anomaly has not been classified or describe, before [13].

1977

5 members of one family with similar clinical and X-ray signs of such herniations, 2 were verified. The presence of cystic structures in the cavity of the small pelvis in conjunction with a congenital defect in the bodies of the sacral vertebrae is an indication for conducting pneumomyelography so as to make a more precise diagnosis. A study of the hereditary and family history is a necessary trend in the examination of such patients because the disease may be of a familial character [14].

1956

LAINE, WEMEAU, LELANDTSHEER, GALIBET. Enorme méningocèle abdomino-pelvienne en rapport avec un spina bifida sacré antérieur; exclusion du sac par voie postérieure transsacrée; guérison [Enormous abdomino-pelvic meningocele related to anterior sacral spina bifida; resection of the sack

through the posterior trans-sacral approach; recovery]. Mem Acad Chir (Paris). 1956 Jan 11-25;82(1-3):65-73. French. PMID: 13287886.

1949

EDER D. Anterior sacral meningocele; survey of literature and report of case. Bull Los Angel Neuro Soc. 1949 Jun;14(2):104-12. PMID: 18152788.

1948

ZULICK TC Jr. Anterior sacral meningocele. Staff Bull Easton Hosp (Easton, Pa.). 1948 Oct;1(3):9-15. PMID: 18887225.

1)
Datta D, Bansal S, Satapathy A, Sahu RN. Sacral Defect with Anterior Sacral Meningocele in a Child - A Mesodermal Developmental Disorder. Neurol India. 2022 Sep-Oct;70(5):2277-2278. doi: 10.4103/0028-3886.359169. PMID: 36352675.
2)
Zhu T, Han J, Vasquez E. Missed anterior sacral meningomyelocele presenting with obstructive uropathy. Urol Case Rep. 2020 Sep 29;34:101434. doi: 10.1016/j.eucr.2020.101434. PMID: 33083233; PMCID: PMC7552098.
3)
Serratrice N, Fievet L, Albader F, Scavarda D, Dufour H, Fuentes S. Multiple neurosurgical treatments for different members of the same family with Currarino syndrome. Neurochirurgie. 2018 Jun;64(3):211-215. doi: 10.1016/j.neuchi.2018.01.009. Epub 2018 May 3. PMID: 29731315.
4)
Mohta A, Das S, Jindal R. Anterior sacral meningocele presenting as constipation. J Pediatr Neurosci. 2011 Jan;6(1):40-3. doi: 10.4103/1817-1745.84406. PMID: 21977087; PMCID: PMC3173914.
5) , 7)
Ashley WW Jr, Wright NM. Resection of a giant anterior sacral meningocele via an anterior approach: case report and review of literature. Surg Neurol. 2006 Jul;66(1):89-93; discussion 93. doi: 10.1016/j.surneu.2005.10.020. PMID: 16793455.
6) , 8)
Tuzun Y, Izci Y, Polat KY. Anterior sacral meningocele: excision by the abdominal approach. Pediatr Neurosurg. 2005 Sep-Oct;41(5):244-7. doi: 10.1159/000087482. PMID: 16195676.
9)
Bader I, Akhter N, Haq AU, Khattak J, Abassi Z. Anterior sacral meningomyelocele with sacrococcygeal teratoma. J Coll Physicians Surg Pak. 2004 May;14(5):302-3. PMID: 15225463.
10)
Massimi L, Calisti A, Koutzoglou M, Di Rocco C. Giant anterior sacral meningocele and posterior sagittal approach. Childs Nerv Syst. 2003 Nov;19(10-11):722-8. doi: 10.1007/s00381-003-0814-1. Epub 2003 Oct 24. PMID: 14576957.
11)
Somuncu S, Aritürk E, Iyigün O, Bernay F, Rizalar R, Günaydin M, Gürses N. A case of anterior sacral meningocele totally excised using the posterior sagittal approach. J Pediatr Surg. 1997 May;32(5):730-2. doi: 10.1016/s0022-3468(97)90018-x. PMID: 9165463.
12)

Kovalcik PJ, Burke JB. Anterior sacral meningocele and the scimitar sign. Report of a case. Dis Colon Rectum. 1988 Oct;31(10):806-7. doi: 10.1007/BF02560112. PMID: 3168668.
13)

Labastida Muñoz H, Tamayo Pérez R, Corichi Barceinas R. Duplicación de recto y ano en el adulto. Comunicación de un caso [Duplication of the anus and rectum in an adult. Report of 1 case]. Rev Gastroenterol Mex. 1978 Sep-Dec;43(3):163-70. Spanish. PMID: 741144.
14)

Solopaev AA, Myl'nikov PI, Gerber IuM, Riazantsev PN. O perednikh kresttsovykh obolochechno-mozgovykh gryzhakh [Anterior sacral meningomyelocele]. Zh Vopr Neirokhir Im N N Burdenko. 1977 Sep-Oct;(5):18-21. Russian. PMID: 919974.