Laparoscopic treatment of an anterior sacral meningocele

Case illustration

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A 44-year-old woman, who had a medical history remarkable for multiple sclerosis, presented with a 3-month history of increasing right lower-quadrant pain and a several-year history of bilateral lower-extremity radicular pain, which was worse on the right side. Her physical examination was most notable for intense abdominal pain that radiated down her right lower extremity when rectal and vaginal examinations were performed. Neuroimaging demonstrated the pathological entities responsible (Fig. 1). A sacral laminectomy was performed, and the perineural cysts were obliterated. Intradural exploration revealed a patent hole on the right side containing an exiting S-1 nerve root. The connection between the cyst and the right S-1 foramen was packed with a fat graft; however, it was not possible to obliterate the anterior meningocele via this posterior approach. The patient’s radicular symptoms recurred, and, in a separate procedure 9 months later, she underwent laparoscopic exploration (Fig. 2 upper). The cyst was opened in a cruciate fashion and its edges cauterized. Its communication with the spinal subarachnoid space was verified by the identification of the fat graft placed during the previous posterior procedure (Fig. 2 lower). After the cyst was fully decompressed, no further leakage of cerebrospinal fluid (CSF) around the fat graft was apparent. The patient’s symptoms resolved, and she remains symptom-free (and without headaches) at 10 months postoperatively.

Over 227 cases of anterior or lateral sacral meningocele have been reported in the literature. These lesions are most common in women of child-bearing age and are generally present in conjunction with symptoms of an abdominal mass. An anterior defect in the sacrum is associated with a fibrous cyst containing CSF. Familial clustering has been documented. Endoscopic treatment of these lesions via a posterior approach has been reported, but the literature contains no reports of laparoscopic management. In this case, a wide opening of the cyst (as opposed to simple fenestration) and separation of the peritoneal cavity and subarachnoid space with a fat graft were crucial aspects in preventing cyst recurrence and spine-related headaches due to shunting of CSF into the peritoneum.

References


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