Anterior sacral meningocele contiguous with a pelvic hamartoma

Case report

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A patient with an anterior sacral meningocele combined with a hamartoma was diagnosed with x-ray films, myelography, and computerized tomography. She was successfully operated on by a transabdominal approach.

KEY WORDS · sacral meningocele · hamartoma · presacral tumor · back pain · sacrum

ANTERIOR sacral meningoceles are rare developmental abnormalities that are becoming increasingly recognized and reported. Haddad reviewed the topic in 1958, and found 51 cases in the literature, adding two of his own. Since then, approximately 80 more cases have been reported. The incidence of presacral tumors is approximately one in 40,000 live births. In this report, we describe a patient with an anterior sacral meningocele contiguous with a pelvic hamartoma.

Case Report

This 17-year-old physically active girl was referred to us because of a several-month history of dull aching low-back pain which intensified with exercise. She denied leg pain, paresthesias, or urinary, gastrointestinal, or menstrual abnormalities.

Examination. Her general medical and neurological examination was normal except for the rectal examination, where a firm rubbery presacral mass was palpable. Palpation of the mass caused the patient’s back pain to intensify. Pelvic x-ray films revealed a “scimitar sign” (Fig. 1). A plain computerized tomography (CT) scan of the pelvis showed a cystic lesion of the left presacral area (Fig. 2 left). Metrizamide myelography was normal except for widening of the distal filum terminale (Fig. 3). Repeat pelvic CT scanning 1 hour after the myelogram showed filling of the presacral cystic component of the mass (Fig. 2 right). A cystometrogram was normal.

Operation. In conjunction with the general surgical service, an anterior approach using a Pfannenstiel's incision was performed. The rectum was mobilized anteriorly, exposing the sacrum and a firm 9-cm mass which extended anteriorly and caudally to become continuous with the posterior rectal wall. The pedicle attached to the rectum was transected. The sacral defect was enlarged superiorly to encounter normal dura, which was followed distally to the 1.5-cm neck of the dural sac. The dural sac was incorporated in and surrounded by the fleshy mass which had been separated from the rectum. The dura was opened, revealing cerebrospinal fluid and the filum terminale. The mass with the meningocele (Fig. 4) was excised by sectioning the meningeal pedicle and closing the meningeal defect in a watertight manner.

Postoperative Course. The patient's discomfort disappeared. She had no neurological deficit and was discharged on the 6th postoperative day. One year later she has had no further complaints or neurological deficits.

Pathological Examination. The wall of the cystic mass was composed of an admixture of meningeal and glial tissue typical of a meningo(myelo)cele (Fig. 5 upper).
Anterior sacral meningocele

In addition, bundles of hypertrophied smooth muscle (Fig. 5 lower), adipose tissue, peripheral nerve and ganglia, and entrapped sweat gland ducts were all identified in the resected specimen. These findings were consistent with a hamartomatous overgrowth of pelvic tissues at the site of the anterior sacral meningocele.

Discussion

The diagnosis of anterior sacral meningocele is rarely initiated by neurosurgeons. Initial complaints are usually related to the urinary, gastrointestinal, or female reproductive systems. Less frequently, back pain, ra-
FIG. 5. Low-power photomicrographs. H & E, x 8.5. Upper: Wall of the meningomyelocele, with the meningeal component at top. Fibrovascular tissue containing an admixture of central nervous tissue elements lies below. Lower: Bundles of hypertrophied smooth muscle are seen fixed to the wall of the meningomyelocele, indicating a hamartomatous component.

... combination of general surgical and neurosurgical expertise allows for the total safe excision of these lesions.

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References


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