Inflammatory pseudotumor of mesentery:
a complication of ventriculoperitoneal shunt

Case report

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A mesenteric mass simulating a neoplasm is reported as a complication of ventriculoperitoneal shunting.

KEY WORDS  •  hydrocephalus • ventriculoperitoneal shunt • inflammatory pseudotumor • mesentery

VENTRICULOPERITONEAL shunts for treatment of hydrocephalus offer potentially fewer serious complications than ventriculocardiac shunts, provided catheter potency can be maintained.1,2 Significant abdominal complications with this procedure have occurred, however, including intestinal volvulus and obstruction,3 perforation of the bowel,4 and abdominal cysts.2 To the best of our knowledge, this is the first report of an inflammatory pseudotumor of the mesentery as a complication of a ventriculoperitoneal shunt.

Case Report

A 31-month-old Spanish-American boy was pronounced dead on arrival at Sandia Base Hospital, Albuquerque, New Mexico, March 18, 1972, following an alleged respiratory arrest at home. Hydrocephalus and an occipital meningocele noted at birth had been treated by insertion of a ventriculoperitoneal shunt and surgical excision at the age of 6 weeks. The shunt was revised 2 weeks later because of continued increase in cranial circumference and an occluded peritoneal tip. Other physical findings at that time included cranial and facial asymmetry, a high-arched palate, a high-pitched cry, and generalized hypotonia. Rubella antibody was weakly positive, and tests for amino-aciduria were negative. During the first year of life he had developed multifocal seizures which were controlled by phenobarbital. The electroencephalogram was interpreted as diffuse cerebral dysfunction. Right hydrophthalmos and a left cataract were first diagnosed at 8 months of age. An older sibling had died shortly after birth with hydrocephalus. The patient had had numerous episodes of upper and lower respiratory tract infections throughout his life but the ventriculoperitoneal shunt had remained patent and functional until his death.

Autopsy disclosed bilateral organizing pneumonia, marked laryngeal edema, a high-arched palate, right glaucoma, left cataract, a patent foramen ovale, hydrocephalus, an Arnold-Chiari type malformation, and cholelithiasis. There was also a firm, tan, lobulated mass in the anterior mesentery adjacent to the midportion of the ileum.

The ventriculoperitoneal shunt extended approximately 27 cm in a subcutaneous
course from the right posterior auricular area anteriorly to the peritoneal cavity just superior to the umbilicus. The catheter tip which had been sutured parallel to the anterior abdominal wall at three points was invested in peritoneum and scar tissue except for the distal 2 cm that projected into the peritoneal cavity. The end of the tip was in contact with the surface of the mesenteric mass. The tip openings were patent. The mesenteric tumor mass was rubbery, firm, and bosselated. It was 5 cm in greatest dimension and was not contiguous with the adjacent ileum. The cut surface was gray-tan, glistening, and had a whorled pattern (Fig. 1 left). Microscopic examination of the mass revealed innumerable plasma cells, occasional Russell bodies, and lesser numbers of histiocytes and lymphocytes interspersed with thin fibrous trabeculae (Fig. 1 right). There was slight calcification in focal areas. The lesion was bordered by a thick band of fibrous tissue. No epithelial elements or neoplastic constituents were present. The mass was interpreted as inflammatory.

**Discussion**

Despite the suturing of the distal catheter tip to the anterior abdominal wall, there remained a 2-cm portion that projected into the abdominal cavity in contact with the upper surface of the mesenteric mass. It is conceivable that posterolateral displacement of the tip could have traumatized the anterior surface of the mesentery, resulting in this inflammatory mass. There was no evidence of scarring of the small bowel or other evidence of intrinsic disease to otherwise account for the mesenteric mass.

Inflammatory pseudotumors are well-recognized lesions that have been described in the eye, salivary gland, larynx, lung, tongue, tonsil, and within the gastrointestinal tract. Their gross appearance is nonspecific; however, histopathologically they consist of a prominent inflammatory infiltrate of
Pseudotumor of mesentery due to ventriculoperitoneal shunt

plasma cells, lymphocytes, histiocytes, and eosinophils. The absence of malignant features should help to distinguish them from malignant lymphomas.

Acknowledgment

Appreciation is extended to Dr. William J. McIver of Sandia Base Hospital, Albuquerque, New Mexico, for permission to use this case.

References


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