Large extra-abdominal cyst as a postpartum complication of peritoneal shunt

Case report

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An extra-abdominal cyst filled with cerebrospinal fluid was found postpartum in a patient with a ventriculoperitoneal (VP) shunt. No similar complication of VP shunting has been reported before.

KEY WORDS • cyst • ventriculoperitoneal shunt • abdominal wall cyst • postpartum complication

SINCE the advent of the Silastic catheter, extracranial drainage of cerebrospinal fluid (CSF) in hydrocephalic patients has been directed to the blood stream or the body cavities. Experience has shown that the right atrium and the peritoneal cavity are well suited for accepting and removing CSF. Such shunting procedures have made it possible for many young women to reach reproductive age. There are very few reports in the literature of pregnancy in women with CSF shunts and no shunt complications have been directly attributed to pregnancy itself. We present the case of a young woman with a ventriculoperitoneal (VP) shunt who underwent an uncomplicated pregnancy and delivery followed by formation of a large extra-abdominal cyst which is thought to be a complication from the pregnancy.

Case Report

This 30-year-old Mexican-American woman was 7 weeks pregnant when she presented in the emergency room with nausea and severe headaches. She was noted to have a depressed sensorium, and an emergency computed tomography (CT) scan of the head revealed moderate hydrocephalus. She underwent implantation of a right VP shunt with resolution of symptoms. Laboratory studies showed positive titers in the CSF for cysticercosis. The patient had a normal spontaneous vaginal delivery of a healthy baby girl 7 months later. She noticed a slowly enlarging mass 3 weeks postpartum over her abdominal incision, which was soft and not tender. There were no headaches or disturbance of sensorium.

Examination. Physical examination revealed a thin woman in no distress. She had a patent valve in her VP shunt. Abdominal examination revealed normal bowel sounds. She had a 15 x 10 cm mass over the abdominal incision in her right upper quadrant which was nonreducible. Admission laboratory studies were unremarkable.

Operation. The old incision was opened and a 15 x 10-cm cyst was found completely extraperitoneally with the intraperitoneal portion of the VP shunt coiled inside it. The peritoneal portion of the catheter was replaced and implanted correctly into the abdominal cavity.

Postoperative Course. The patient left the hospital on the 3rd postoperative day. She has been followed for 23 months and is free of symptoms. The shunt is functioning well.

Discussion

Complications of the VP shunt are not uncommon. Grosfeld, et al., noted a 24% intra-abdominal complication rate requiring shunt revision. These include hernias, colon perforation, intra-abdominal CSF cysts, knotted catheters, intestinal obstruction, and infection. In our patient, a 20-in. portion of catheter had been placed into the abdomen. It was thought that increased
intra-abdominal pressure caused by an enlarging uterus as well as the stress of the labor process and bearing down during the vaginal delivery caused the catheter to slip out of the abdominal cavity. In this case, a working valve system and compliant subcutaneous tissue made it possible for the shunt to continue to be functional, as evidenced by the absence of symptoms. It has been reported that occurrences of intra-abdominal CSF cysts are a poor prognostic sign regarding the usefulness of the abdominal cavity, since subsequent shunts may fail. However, since this was an extra-abdominal cyst, simple cyst excision and reimplantation of the shunt appear to have been adequate treatment for this patient. By using longer intra-abdominal segments in young women, perhaps this complication can be prevented in the pregnant patient.

References


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