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Mature mesenteric teratoma in a child: a case report

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Summary

A 15-month-old girl with a palpable and mobile mass was misdiagnosed as an ovarian teratoma by computed tomography (CT). A midline laparotomy was performed and the pathology report identified that it was a mature mesenteric teratoma.

Key words: Mesenteric teratoma; Laparotomy.

Introduction

Mesenteric cysts are rare abdominal tumors in infants and children. Dermoid cysts of the mesentery in infants and children are rare and only few cases have been reported. Here the authors describe a 15-month-old girl with a palpable and mobile mass that was misdiagnosed as an ovarian teratoma by computed tomography (CT). A midline laparotomy was performed and the pathology report identified that it was a mature mesenteric teratoma.

Case Report

A 15-month-old girl was admitted to the present service as a case of progressive abdominal and pelvic distension, noticed initially at the age of one month with a palpable and mobile mass. She was, otherwise, asymptomatic. On examination, the pelvic and abdomen was massively distended with skin. A large cystic mass could be felt occupying the entire pelvic and abdomen (Figure 1). Bowel sound was normal. Her mother had a history of schizophrenia. CT scan confirmed the presence of a cyst with solid components, pressing the organs including stomach, intestine, pancreas, left kidney, and liver and extending down to the pelvis (Figure 2). Exploration revealed the mass of roughly 13.5 x 10.0 x 15.0 cm^3. The uterus, ovaries, and ascites were not detected. The mass was full of fibrous trabs, adipose, calcification, and hydatid liquid. The mass had sharpness of border. CT suspected it was an ovarian teratoma. Intravenous pyelography was not performed.

Laboratory tests revealed serum CA 125 levels of 32.7 U/ml, CA 19-9 levels of 174.83 U/ml, CA 153 levels of 13.2 U/ml, AFP 9.3 ng/ml, β-hCG 1.40 mIU/ml, and CEA levels of 1.1 U/ml. She had symptomatic anemia (hemoglobin, 104 g/L) and thrombocytosis (blood platelets 722x10^9/L). Blood biochemistry, blood clotting test, and electrocardiogram were normal.

Under general anesthesia, a midline laparotomy was performed. At exploration, the uterine and ovaries were all normal (Figure 3). A round and smooth mass of nearly 18 cm in diameter was identified, residing in the left half of the transverse mesocolon and upper small intestine mesentery. It was confirmed as a mesenteric mass (Figure 4). In order to prevent acute heart failure, slow suction of hydatid fluid was performed first. In the process of tumor dissection, the authors found that the mass was adhered to the pancreas, stomach, and spleen. Fortunately, during the operation, no mesenteric artery was sutured. Mesenteric lymph nodes and other abdominal viscera were normal. The child had an uneventful recovery. The specimen was sent to the pathologist. The pathology report confirmed a "cystic mature teratoma." The histology showed that it was composed of adipose tissue, bone, hair, and glial tissue. All elements were described as

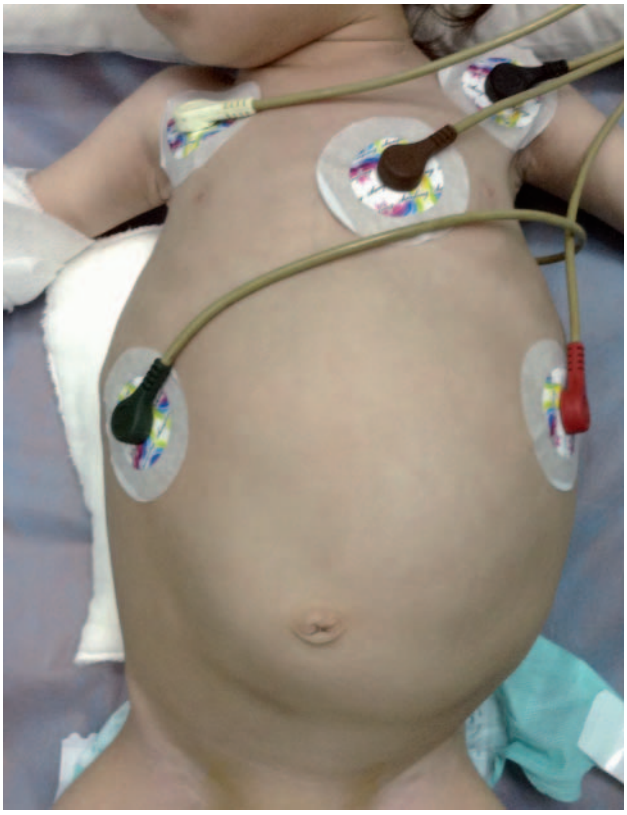

Figure 1. — A large cystic mass which occupied the pelvis and abdomen could be felt.

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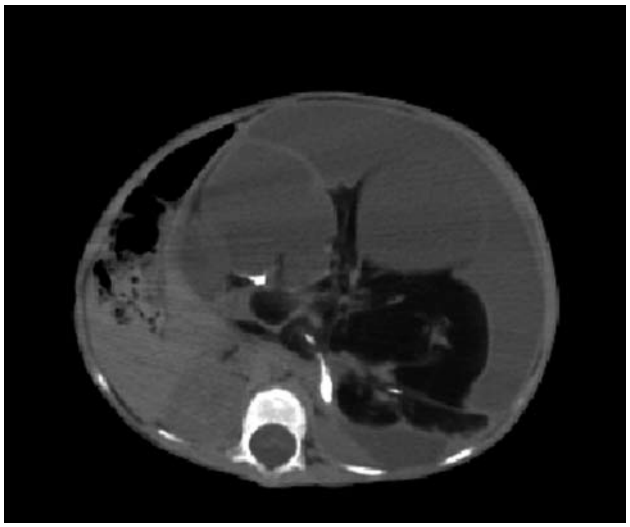

Figure 2. — Computer tomography scan (CT) suggesting the presence of a cyst with solid components.

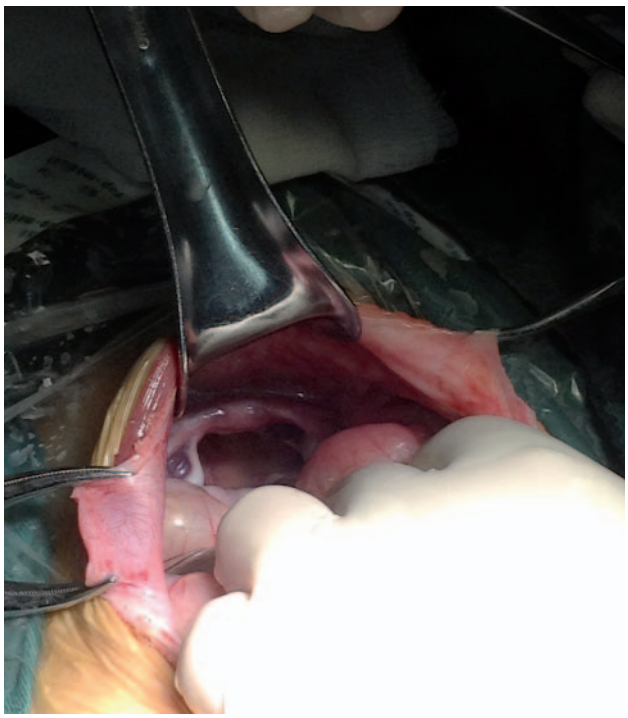

Figure 3. — The uterus and ovaries are both normal.

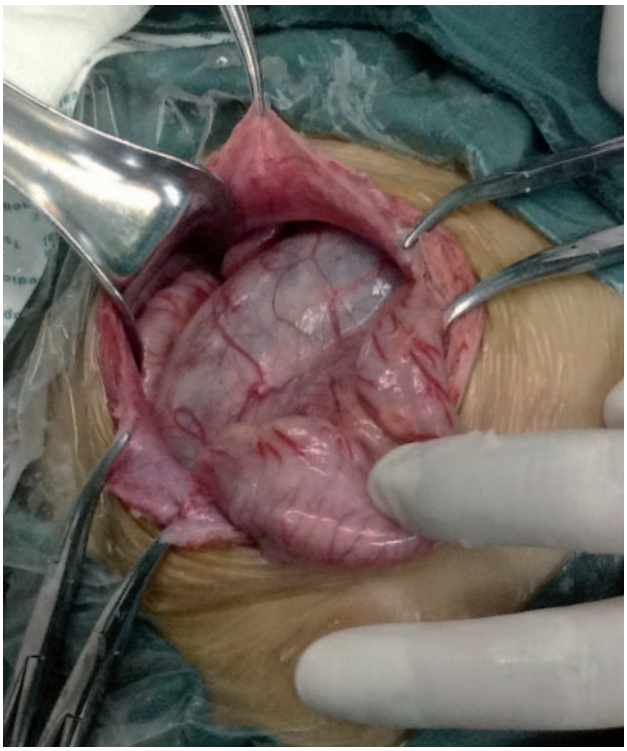

Figure 4. — A mesenteric mass is identified

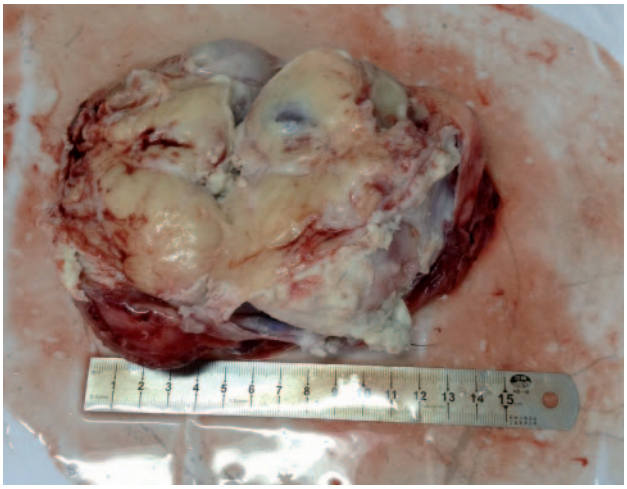

Figure 5. — The postoperative specimen.

mature (Figure 5). She was discharged on the fifth postoperative day, and found in good health two months later.

Discussion

Mesenteric cysts are rare abdominal tumors with an incidence of one per 105,000 - 250,000 hospitalized adult surgical patients [1]. However, it has no exact incidence in infants and children. Dermoid cysts of the mesentery in children are unusual cause of mesenteric cysts and only few cases have been reported [2, 3].

Parents often bring their infants and children to clinicians after noticing an abdominal mass. Teratomas have no pathognomonic signs or symptoms, and their clinical manifestation depends greatly on the size and location of the growth. MRI, ultrasonography, and CT are considered

suited for the diagnostic evaluation of teratomas. However, preoperative diagnosis of the mesenteric teratoma may be difficult, especially its origin [4]. In the present case, the mass was misdiagnosed as an ovarian teratoma. It always requires surgery to diagnose.

In 2000, De Perrot *et al.*, suggested a classification for mesenteric cysts based on histopathological features: (a) cysts of lymphatic origin (simple lymphatic cyst and lymphangioma); (b) cysts of mesothelial origin (simple mesothelial cyst, benign cystic mesothelioma, and malignant cystic mesothelioma); (c) cysts of enteric origin (enteric cyst and enteric duplication cyst); (d) cysts of urogenital origin; (e) mature cystic teratoma (dermoid cysts), and (f) pseudocysts (infectious and traumatic cysts) [5]. In the present case, it was a mature cystic teratoma.

The diagnosis of a teratoma has to be confirmed by the histology of the excised tumour. Complete tumour resection is sufficient to cure a benign teratoma. A significant portion of benign tumors have immature elements that may undergo malignant degeneration; hence the presence of malignancy or high-grade immature elements is an indication for adjuvant cisplatin-based chemotherapy after resection [6-8]. As with teratomas at other sites, complete tumor resection via laparotomy or laparoscopy is the definitive treatment of choice and outcome is generally favorable [8]. However, in the present case, the authors did not identify the origin and nature of the mass and they chose laparotomy with a longitudinal incision.

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