

Mesenteric cyst causing intestinal obstruction

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Case Report

A 5-years old girl presented to us as recurrent attack of vomiting, abdominal pain, abdominal distention and absolute constipation (with cardinal feature of intestinal obstruction) for ten days duration. Abdominal radiography (erect position) shows multiple fluid levels (more than 7). At lapratomy distended small bowel and collapsed cecum, a small bowel was delivered to wound and was show a mesenteric cyst 30 cm proximal to ileocecal valve, encircling all sides of small bowel (multiloculated cyst) as shown in figure (1). Bowel resection was done for cyst containing segment with end. Histopathological results show chylolymphatic multi loculated cyst encircling all sides bowel wall. The patient remains well at 8-month follow-up.

Discussion

Mesenteric cysts are classified as:

- Chylolymphatic
- Enterogenous
- Urogenital remnant
- Dermoid (teratomous)

A mesenteric cyst is encountered most frequently in the second decade of life, less often between the age of 1-10 years and exceptionally in infant less than one year (1). In 1907, the Italian anatomist Benevieni first reported a mesenteric cyst following an autopsy on an 8-years old girl (2) In 1842, Von Rokitansky described a chylous mesenteric cyst.(3). Mesenteric cysts are rare; the incidence is about 1 per 20,000 pediatric hospital admissions (4). The mean age of children affected is 5-years (5). Mesenteric cysts are thought to represent benign proliferations of ectopic lymphatic that lack communication with normal lymphatic system (5). Mesenteric cyst can occur anywhere in the mesentery of the gastrointestinal tract from the duodenum to the rectum, and they may extend from the

base of the mesentery in to the retroperitoneum (6). They most commonly occur in the ileal mesentery of the small bowel. (4).

Mesenteric cyst can be single or multiple, unilocular or multilocular, and they contain hemorrhagic, serous, chylous or infected fluid (6). The fluid is serous in ileal and colonic cysts and chylous in jejunal cysts (7) Mesenteric cyst can be discovered as an incidental finding during lapratomy for another condition, or they can manifest as an acute life-threatening intra-abdominal catastrophe.(8)

The most common node of acute presentation in children is that of a small-bowel obstruction (9). In the series from Eggleston children's hospital in Atlanta, 21% of patients were asymptomatic, 71% presented with abdominal distention, 50% with abdominal pain, 50% with vomiting and 43% with palpable abdominal mass (6). Approximately 10% of patient with mesenteric cyst presented with an acute abdominal emergency (8). In a series of 82 children who underwent surgery for a variety of causes of intestinal volvulus mesenteric cyst was the underlying etiology in 3.65% of cases. (10).

Indication of surgery in children, the most common indication for surgical intervention is presence of an abdominal mass with or with out sign of intestinal obstruction (8).

Malignant transformation of mesenteric cyst has occurred in adults but malignant mesenteric have not been reported in children (4). Mesenteric cyst can often be shelled out from between the leaves of mesentery while taking care to avoid damage to the mesenteric vessels (11) or they may require concomitant bowel resection (8)

Imaging investigations: Radiography – Plain abdominal radiographs may show a gasless, homogenous, water-dense mass that displaces bowel loops laterally or anteriorly

(6). Fine calcification can some times be observed within the cyst wall (12)

Ultrasonography: The imaging modality of choice is abdominal ultrasonography (9) ultrasonic studies demonstrate fluid filled cystic structures commonly with thin internal septi and some times with internal echoes from debris, hemorrhage, or infection.(5)

Computed tomography scanning: Abdominal CT scanning add minimal additional information (7)

Histologic findings: A mesenteric cyst is define as any cyst that is located in the mesentery and may or may not extend into the retroperitoneum, a mesenteric cyst also has a recognized lining of endothelial or mesothelial cell (8)

Treatment: No medical therapy is available.

Surgical therapy: the goal of surgical therapy is complete excision of the mass (5) the preferred treatment of mesenteric cyst is enucleation, although intestinal resection is frequently required to ensure that the remaining bowel is healthy (4)

Follow-up care: Routine post operative follow up care 2-3 weeks after discharge from hospital is indicated. In our patient, the mesenteric cyst was encircling the ileum, 30cm proximal to ileocecal valve, the cyst capture the small bowel from mesenteric border to anti mesenteric border and it was multiloculated cyst, causing mechanical intestinal obstruction, resection of small bowel segment that contains this cyst and end to end anastomosis was done by two layers technique. In our patient mesenteric cyst causing intestinal obstruction regard as unique pathology.

References

1. Baily & Love's Short practice of surgery. The peritoneum, Mesentery 24th ed. By Arnold, 1260 mesenteric cysts 1149.
2. Mohanty SK, Bal RK, Maudar K K: Mesenteric cyst an unusual presentation. J Pediatr Surg. 1988 May, 33(5):679-81.
3. Von Rokitsansky CF: Handbuch der pathologischen anatomie, bdz handbuch der speciellen pathologischen Anatomie Wein: Braumuller and Seidel; 1842.
4. Kurtz RJ, Heimann TM, Holt J, Beck AR. Mesenteric and retroperitoneal cysts. Ann Surg 1986 Jan; 203(1):109-12.
5. Bliss DP Jr, Coffin CM, Bower RJ et al: Mesenteric cyst in children. Surgery 1994 May; 115(5):571-7.
6. Egozi EL, Ricketts RR: Mesenteric and omental cyst in children. Am Surg 1997 Mar; 63(3):287-90.
7. Vanek VW, Phillips AK: Retroperitoneal mesenteric and omental cysts. Arch Surg 1984 Jul; 119(7):838-42.
8. Ricketts RR: Mesenteric and omental cysts In: Pediatric Surgery, 5th ed, 1988:1269-1275.
9. Mollit D L, Ballantine TV, Grosfeld JL: Mesenteric cyst in infancy and childhood. Surg Gynecol Obstet .1978 Aug; 147(2):182-4.
10. Maung M, Saing H: Intestinal Volvulus: an experience in a developing country. J Pediatr Surg 1998 May; 33(5):679-81.
11. Feins NR, Raffensperger JG: Cystic hygroma, lymphangioma and lymphedema. In: Raffensperger JG. Swensons Pediatr Surg. 5th, ed. Norwalk, Conn: Appleton and Lange; 1990; 172-173.
12. Colony A : Mesenteric and Omental cysts In: Welch KJ, et al, eds Pediatric Surgery 4th ed, Chicago, III: Year Book Medical Publishers; 1986:921-925.

Figure 1: Resected small bowel segment containing mesenteric cyst.

