

Chylous cysts of the mesentery

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ABSTRACT

Mesenteric cysts are uncommon lesions with a variable clinical presentation. A provisional diagnosis is possible on clinical and radiological grounds, while confirmation is subject to histopathological examination. We present two cases of mesenteric cysts, both occurring in children. Following clinical examination and histopathological analysis, both were diagnosed as cases of chylous mesenteric cysts.

KEY WORDS: Childhood chylous mesenteric cyst, small bowel

INTRODUCTION

Mesenteric cysts are infrequently encountered lesions, which have been reported both in children and adults. Documented data indicates an incidence of 1 in 35,000 pediatric hospital admissions.^[1] Different types of mesenteric cysts have been described.^[2] They include enterogenous, urogenital remnant, dermoid and chylo-lymphatic cysts,^[3] the latter being the topic of this case report. The chylo-lymphatic variant is frequently observed in association with the small bowel.^[4] These cysts are considered to arise from lymphatics lacking an efferent communication with the lymphatic system, and they are most often unilocular and solitary.^[3] We present two cases, one a 3-year-old child who presented with an abdominal lump; and the other, a 5-year-old child with intestinal obstruction secondary to intussusception. Both were diagnosed as cases of mesenteric chylous cysts, consequent to exploratory laparotomy and histopathological examination.

CASE REPORTS

Case 1

A 3-year-old Indian child presented with an abdominal lump. The abdomen was distended and per-abdomen examination revealed a tense, nontender, intra-abdominal lump extending from the hypogastrium to the right lumbar region. There were no other associated clinical findings, and the child was otherwise in good health.

Following requisite investigations, an exploratory

laparotomy was undertaken. Per-operatively, multiple mesenteric cysts were apparent, involving about 6 inches of the ileum and located about 3 feet proximal to the ileocecal junction. The cysts were removed, along with a segment of ileum, and a resection anastomosis was performed. The specimen was sent for histopathological examination.

Case 2

The second case involves a 5-year-old Saudi child who presented with symptoms and signs of acute intestinal obstruction, as a consequence of intussusception. Following surgical exploration, the primary cause was found to be a cyst of the mesentery, which was removed and preserved for subsequent histopathological analysis.

Pathological findings

In both cases, the gross appearance was that of a single multilocular cyst [Figure 1]. In the first case, the cyst revealed three interconnected locules, the largest being 7 cm in diameter. The fluid content was milky (chyle) and the walls were papery thin, with patchy congestion and presence of small blood clots. The attached ileal segment showed focal mucosal atrophy and congestion of the wall. The second specimen was 5 cm in diameter, and similar findings were noted on gross examination.

Microscopic examination of submitted tissue sections from the cyst wall of the first case revealed fibrous tissue with focal presence of a flattened cell lining [Figure 2A]. Accompanying inflammation and necrosis of attached



Figure 1: Multiloculated chylous cyst with attached segment of ileum

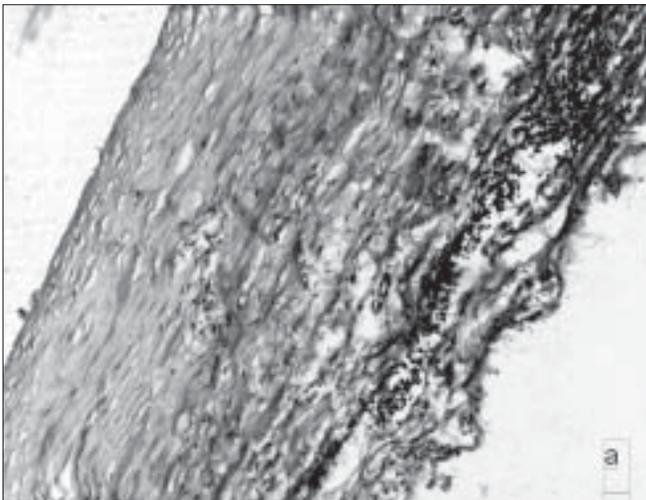


Figure 2A: Thin fibrous tissue cyst wall lined by attenuated endothelium (Hematoxylin and Eosin, x125)



Figure 2B: Numerous cholesterol clefts and dilated lymphatic channels (↑) within wall of chylous cyst (Hematoxylin and Eosin, x125)

bowel wall were observed. The cyst wall of the second specimen showed the presence of numerous cholesterol clefts and dilated lymphatic channels [Figure 2B]. In both cases, a final diagnosis of a mesenteric chylous cyst was rendered.

DISCUSSION

Mesenteric cysts are most frequent in the second decade of life but are known to occur in the first decade as well.^[3] They are variable in size and their contents may be serous fluid or chyle, the frequency being equal in the case of small bowel cysts.^[1] As many as 50–60% occur in association with the ileal mesentery.^[5] Patients may have contrasting clinical presentations,

as is evident in our report. They may be asymptomatic but may present as a case of acute abdomen secondary to a volvulus or bowel infarction.^[6] Ultrasonography should be performed prior to surgical intervention so as to exclude other causes of an abdominal lump. The differential diagnosis includes renal and splenic cysts, hydronephrosis and periappendiceal abscess,^[4] as well as other cystic lesions of ovarian or enteric origin.^[6] A fat-fluid interface on computed tomography is indicative of a chylous cyst.^[7] This is helpful in deciding the course of action to be adopted during surgery. Histologically, the cysts are lined by a flattened endothelium with a fibrous wall in which dilated lymphatics may be observed.^[6] The presence of cholesterol clefts further supports the pathological diagnosis of a chylous cyst. Apart from being the cause of an acute abdomen, these cysts may undergo rupture, hemorrhage or infection.^[3] Malignant transformation is rare but not unknown.^[6] Surgical removal of these cysts is usually curative.

REFERENCES

1. Kurtz RJ, Heiman TM, Holt J, Beck AR. Mesenteric and retroperitoneal cysts. *Ann Surg* 1986;203:109-12.
2. Beahrs OM, Judd ES Jr, Dockerty MB. Chylous cysts of the abdomen. *Surg Clin North Am* 1950;30:1081-96.
3. Mann CV. The peritoneum, omentum, mesentery and retroperitoneal space. *In:* Mann CV, Russell RC, Williams NS, editors. *Bailey and Love's short practice of surgery*, 22nd ed. Chapman and Hall: London 1995. p. 764-80.
4. Hines OJ, Ashley SW. Lesions of the mesentery, omentum and retroperitoneum. *In:* Zinner MJ, Schwartz SI, Ellis H, editors. *Maingot's abdominal operations*, 10th ed. Appleton and Lange: 1997. p 709 - 722.
5. Chung MA, Brandt ML, St-Vil D, Yazbeck S. Mesenteric cysts in children. *J Pediatr Surg* 1991;26:1306-8.

6. Heiss K. Intestinal duplications. *In*: Oldham KT, Colombani PM, Foglia RP, editors. Surgery of infants and children - Scientific principles and practice. Lippincot-Raven: Philadelphia; 1997. p. 1265-74.
7. Nakamura H, Hashimoto T, Akashi H, Mizumoto S. Distinctive CT-findings of unusual mesenteric cysts. J Comput Assist Tomogr 1987;11:1024-5.
8. Tykka H, Koivuniemi A. Carcinoma arising in a mesenteric cyst. Am J Surg 1975;129:709-11.

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