

A Rare Case of a Jejunal Mesenteric Cyst in a 8-Year-Old Boy

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Abstract

Mesenteric cysts are rare benign intra-abdominal vesicles with various clinical presentations. Clinical manifestations of the disease are very diverse and variable, and can occur as a spectrum of asymptomatic abdominal cramps and acute intestinal obstruction. They almost located in the mesentery of the small intestine. The selective therapeutic method is complete surgical excision, however more than half need resection and bowel anastomosis. Here, we presented a 8-year-old boy with a huge mesenteric cyst that was excised surgically., which the diagnosis confirmed by computed tomography scan and managed through surgical excision.

Keywords: Mesenteric Cyst; chylous cyst, Pediatrics; excision of Mesenteric cyst

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I. Introduction

Mesenteric cysts are benign and rare abdominal masses that may appear anywhere in the omentum or mesentery of the gastrointestinal tract. There is a possibility of extension from the mesentery to the retroperitoneal regions (1). The cysts contain chyle or a clear serous fluid and may occur in the mesentery of the small intestine (60%) or colon (40%). The incidence of mesenteric and omental cysts has been reported in about 1 case per 20,000 in children, and 1 in 105,000 cases in adult. About one-third of the cases occur in children younger than 15 years old, and the mean age-of-onset is 4.9 years (2). Depending on the size of the cyst, patients may present with complaints of abdominal pain, fever, and emesis. A mid abdominal mass may be palpable on examination of the abdomen. The diagnosis can usually be made preoperatively with ultrasonography or CT. Enucleation of the cyst at laparotomy is curative and can generally be accomplished because the mesenteric blood vessels and intestinal wall are usually not adherent to the cyst wall. Internal drainage of the cyst into the peritoneal cavity has also been successfully used in the treatment of very large cysts. Aspiration alone has a high rate of cyst recurrence. In those cases in which the cyst is not completely excised, the contents of the cyst and the internal architecture of the cyst wall must be carefully inspected and the cyst wall examined histologically to rule out a non-neoplastic cause. In this paper, a case of 8-year-old male child who underwent surgical resection of Jejunal segment with mesenteric cyst was reported.

II. Case Study

A 8-year-old male child, with a history of non-specific abdominal pain since 2 years, which aggregated for 2 days, was presented to civil hospital, rajkot. He had complaints of vague generalized abdominal pain, which increased gradually over the last two days before admission. Associated symptoms included nausea, loss of appetite and abdominal swelling near the umbilicus. At the physical examination, we found a noticeable abdominal swelling of approximately 2x2 cm² palpated over the right periumbilical region approx 3 cm lateral and inferior to umbilical with no palpatory tenderness. At the time, routine blood investigations were done and found to be within normal limits. The abdominal ultrasound scan (US) showed a multiloculated cystic lesion with an approximate dimension of 70x40 mm near the right lumbar region, arising from mesentery. For further examination, a computed tomography (CT) scan was recommended. In the abdominopelvic CT scan performed. A well defined multiloculated cystic lesion of size 56 x 51 x 51 mm is noted in the right subhepatic region. The lesion showed multiple septa within. No significant enhancement is noted on post contrast study. Hepatic flexure of colon is situated on posterior aspect of lesion. The lesion is abutting/surrounding distal small bowel loop, with No evidence of calcification or fat density areas are noted within the lesion. Probability of lymphangioma/mesenteric cyst. The patient underwent surgery. 8x6 cm² multiloculated mesenteric cyst was found on mesenteric border of jejunum approx 110 cm away from duodeno-jejunal junction. the huge mass was

excised entirely with surrounding jejunal segment(Figure 1),jejununo-jejunal anastomosis was done. In order to identify the main identity of the mass, it was sent to the pathology department for further assessments. The patient had a favorable postsurgical evolution, without presenting any complications. The histopathologic examination confirmed the diagnosis of the mesenteric cyst. liquid diet started on post operative day 4 ,followed by discharge on next day as the patient tolerated the diet well.



Figure 1 . 8×6 cm² multilobulated mesenteric cyst was found on mesenteric border of jejunum approx 110 cm away from duodeno-jejunal junction.



A well defined multiloculated cystic lesion of size 56 x 51 x 51 mm is noted in right subhepatic region. The lesion showed multiple septa within.

III. Discussion

Not much information is available in the literature regarding the treatment of symptomatic cases of mesenteric cysts. In addition to the rare nature of the disease in radiology examinations, it is also very difficult to diagnose such cases, especially in incidences where the patient is referred with nonspecific symptoms. Mesenteric cysts were first described in 1507 by the Italian pathologist Antonio Benivieni (5). Their exact etiology is still unknown. The most accepted theory about the etiology of mesenteric cysts is benign ectopic lymphatic proliferation in the mesentery that are not related to other parts of the mesenteric system (6). It can be found in any regions of the gastrointestinal tract from the duodenum to the rectum in the mesenteric or omentum, and is likely to spread to the retroperitoneal space (7). More than half of the cysts are found in the small bowel mesentery, and particularly are seen in the ileum. Mesenteric cysts may be isolated as single, multiple and unilocular to multilocular, containing serous, chylous and hemorrhage, or combination of these fluids or infectious fluid (8, 9). The size of the mesenteric cysts is reported to be less than 40 centimeters. Clinical symptoms of the disease include common gastrointestinal tract disturbances, such as vague abdominal pain, bulging, and palpation of a lump that complicates and presents more severe manifestations, following perforation and torsion or intestinal obstruction (10, 11). In our patient, clinical manifestations were abdominal pain, nausea, and decreased appetite. Diagnosis of mesenteric cysts is often achieved through ultrasonography. However, MRI is preferred and recommended in order to confirm the sonographic findings. Ultrasonography provides information such as the size, location, and the presence of intrinsic septal in these cases. Although a CT scan adds little information to sonographic findings, it is advisable to be performed for better identification of the anatomy of the mass, and to determine its association with the surrounding organs (12). The diagnosis of mesenteric cysts is often made by ultrasonography and CT scans, but sometimes the diagnosis is determined only during surgery, due to the complexity of the mass in terms of size and the location. The few differential diagnoses that are commonly arising in such cases include omental cysts, choledochal cysts, hydronephrosis, teratomas, and duplication cysts (13-15). Mesenteric cysts are classified based on different factors. The most practical ones are the Losanoff pathological classification. It correlates pathological conditions with surgical options and strategies, apart from the nature of cysts. Accordingly, mesenteric cysts are divided into four groups: Type 1: pedicled cysts; type 2: Sessile that are limited to the mesentery and can be excised completely; type 3: Spread to the retroperitoneum, which is often inadequately resected, and type 4: Multicenter cysts requiring complex surgery, sclerotherapy, or both (16). The standard treatment for mesenteric cysts is surgical resection. Since the early 1990s, laparoscopic approach has been used as a selective method. However, in cases where the size of the mass is large or there is an excessive adhesion to the surrounding tissues or retroperitoneum, it may be necessary to turn the procedure to an open surgery technique (17). In 20 to 60 percent of cases, resection and enteric anastomosis may be required in addition to the resection of the cysts. In the rare cases, where full intestinal retention is not possible after en-bloc intestinal resection, temporary

ileostomy is an appropriate option (18). In a few cases, such cysts have been treated through ultrasound drainage and ethanol sclerotherapy (19).

IV. Conclusion

Acute abdominal pain may be due to the presence of mesenteric cysts, but it is not always possible to differentiate and diagnose it preoperatively, and this challenge especially exists in the case of bulky masses. In the present clinical experience, radical excision of the mass was possible, thus allowing having a reliable histological assessment and discovery. Moreover, it avoids any recurrences and complications. In conclusion, it is recommended to choose primary radical, surgical treatment in case of intra-abdominal cystic mass in the pediatric age.

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