

Large Mesenteric Cyst Arising from the Mesentery of Sigmoid: Case Report and Review of Literature

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ABSTRACT

Mesenteric cysts are rare and usually remain asymptomatic. Symptoms when present are usually non-specific thus making their pre-operative diagnosis challenging. When present complete enucleation of the cyst is advisable in view of risk of recurrence and transformation to malignancy and therefore knowledge of mesenteric cysts is important. We report a case of a 35 year old male who presented with a swelling in left lower abdomen with vague abdominal pain since 8 months, associated with constipation since 2 months. Patient was diagnosed to have a large mesenteric cyst arising from the mesentery of the sigmoid colon and underwent a laparotomy with total excision of the cyst.

INTRODUCTION

Mesenteric cyst are one of the rare intra-abdominal tumors.[1] They pose a diagnostic and therapeutic challenge due to non-specific signs and symptoms, and low incidence. However, it is important to have adequate knowledge of these lesions due to their high propensity for recurrence and risk of malignant transformation in suboptimal treatment. We report a case of 35 year old male who was diagnosed to have a mesenteric cyst and underwent a laparotomy for complete excision of the cyst.

CASE REPORT

A 35 year old male presented in our OPD with complaints of a swelling in the left lower abdomen associated with vague abdominal pain since 8 months. Swelling was gradually increasing in size. There swelling showed no change in size on lying down. Pain usually subsided with medication. Patient also complained of constipation since 2 months which was relieved with laxatives.

There was no history of weight loss, anorexia or diarrhea. There was no history of any other chronic illnesses in the past. On thorough physical examination patient was found to have an ill defined lump in the left lumbar region extending into the left iliac fossa and umbilical region. The lump was non-tender and dull on percussion. There was no shifting dullness. Perrectal examination was unremarkable. Routine investigations including complete hemogram, liver and kidney function tests were unremarkable. Ultrasonography revealed a cystic lesion measuring approximately 9 x 5 cm in the left lower abdomen abutting the urinary bladder. Cyst had internal echoes suggestive of septations. Patient was then subjected to a contrast enhanced computerized tomography which revealed a hypodense cystic lesion of size 7.5 x 6.5 x 9 cm in the left lower abdomen. Fluid within the cyst had a density of 15- 25 HU. Few subcentimetric mesenteric lymph nodes were also noted. Rest of the abdominal viscera was normal. (Fig 1 & Fig 2).



Figure 1: CECT abdomen (Sagittal Section) showing a hypodense cystic lesion arising in the left lower abdomen abutting the urinary bladder and displacing the sigmoid colon.



Figure 2: CECT abdomen (coronal section) showing a hypodense cystic lesion in the left lower abdomen abutting the urinary bladder

Patient was provisionally diagnosed to have a mesenteric cyst arising from the mesentery of the sigmoid colon and planned for total excision of the cyst. Upon exploratory laparotomy the provisional diagnosis was confirmed and a cystic lesion was seen originating from the base of the mesentery of the sigmoid colon. (Fig 3) The lesion was not adherent to any of the surrounding structures and rest of the abdominal viscera was healthy. (Fig 4) Upon excision the cyst measured nearly 8 x 7 cm. The cyst was cut open and nearly 400 mL of straw colored gelatinous fluid was extracted. (Fig 5)



Figure 3: intra-operative photograph showing a cystic lesion arising from the base of the mesentery of the sigmoid colon

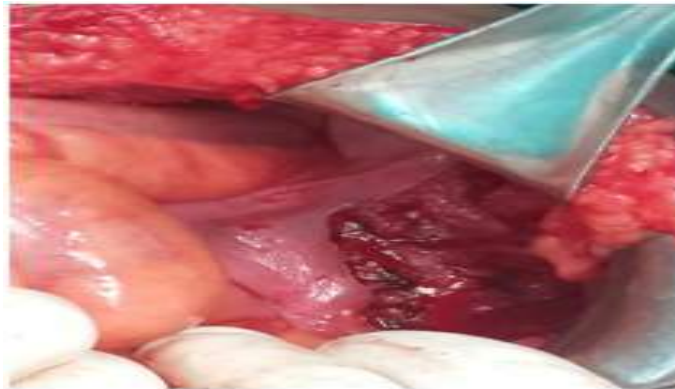


Figure 4: intra-operative photograph showing the base of mesentery of sigmoid colon after complete excision of the cyst



Fig 5: intra-operative photograph showing mesenteric cyst after excision and cut open. Straw colored fluid extracted from the cyst

Histopathological examination of the cyst wall confirmed the diagnosis of mesenteric cyst. Wall of the cyst was lined with epithelium and consisting of a fibrocollagenous stroma alongwith few congested blood vessels. The patient was discharged on the 5th post operative day with no complaints during his hospital stay. On 3 months follow up the patient is doing well and is relieved of his symptoms.

DISCUSSION

Mesenteric cysts are rare intra-abdominal tumors with reported incidence ranging from 1 per 20,000 hospital admissions to 1 per 250,000.[1] Although they can present at any age, nearly one third mesenteric cysts are seen in children less than 14 years of age. Another peak is seen in the fourth decade.[2] Mesenteric cysts were first described by an Italian anatomist named Beneveni in 1507. He identified mesenteric cysts while performing autopsy on an 8 year old boy. [3] However the first accurate description was put forward by Rokistansky in 1842. [4] There are several theories regarding the etiology of mesenteric cysts, however the most widely accepted theory is the one put forward by Gross. He proposed that mesenteric cysts are a result of benign proliferation of ectopic lymphatics that lack communication with the normal lymphatic system.[5] Other theories include failure of embryonic lymph channels to join the venous system, failure of the leaves of embryonic mesentery to fuse and degeneration of lymph nodes and lymphatics secondary to trauma or infection or neoplasia. [6]

Mesenteric cysts have now been classified into four etiologic groups – i) Embryonic and developmental ii) traumatic and acquired iii) infective and degenerative iv) neoplastic cysts [7] Mesenteric cysts are most often located in the mesentery of ileum, followed by the mesentery of sigmoid colon.[8] However they may also be present in the omentum and retroperitoneum. Although usually single and unilocular it is not uncommon to find multiple as well as multilocular cysts.

Contents are usually serous, chylous and infrequently hemorrhagic or infected material. Cysts arising from the mesentery of jejunum are more likely to have chylous contents. [9][10] There have also been reports of mesenteric cysts filled with milk of calcium and rare reports of gas accumulation within the cysts. [11][12] Size of the mesenteric cyst has been reported to vary from few mm to several centimeters.

There have also been reports of large mesenteric cysts which may be confused with tubercular ascites. [13][14] Most of the mesenteric cysts remain asymptomatic until they grow to giant proportions. They are often diagnosed incidentally during work up for appendicitis, small bowel obstruction, diverticulitis, or even during laparotomy. Symptoms if present are usually non-specific with vague abdominal pain being the most common symptom. [15] Other symptoms may be nausea, vomiting, constipation or even diarrhea. Children are more likely to have acute presentation of mesenteric cysts such as volvulus, perforation, infection, torsion, anemia due to hemorrhage into the cyst, intestinal obstruction as well as obstructive uropathy. [16][17] Very rarely mesenteric cysts may show malignant transformation into carcinoma or sarcoma. [18][19] There have also been reports of mesenteric cysts presenting as irreducible inguinal hernia. Simple mesenteric cysts are usually devoid of muscular layer and have a largely fibrous wall which is lined by an attenuated epithelium.

The absence of an epithelial lining points towards traumatic origin of the cyst. Enterogenous or Duplication Cysts on the other hand have well defined muscular layer as well as epithelium similar to intestinal epithelium. Enterogenous cysts share their blood supply with the GIT. Urogenital cysts of the mesentery on the other hand may contain primitive renal structures which are a clue to their mesonephric origins. Patients who have undergone an oophorectomy may present with 'mesenteric cyst-ovarian implant syndrome' and the cysts seen here are typically lined with luteal cells and normal ovarian tissue may also be present in the vicinity. [20] Radiological investigations such as Ultra sonography and CT scan can provide adequate information regarding anatomical relations, site and size, and internal architecture and this obviates the need for more invasive tests.

However the diagnosis can only be confirmed upon histopathological examination. Surgery is the mainstay of treatment with complete excision of the cyst being the method of choice in view of risk for recurrence and malignant transformation. Surgery may be performed safely with either open or laparoscopic approach. Aspiration of cyst is inadvisable. However in cases where location of the cyst makes complete excision technically demanding, such as cysts located in retroperitoneum, marsupialization of the cyst may be performed with close follow up. In some cases the cyst may share the blood supply of the neighboring bowel which may require segmental resection of bowel.

CONCLUSION

Even though rare mesenteric cysts should always be considered as a possible cause for non-specific abdominal complaints. Once diagnosed they should be adequately treated with complete excision of the cyst to avoid recurrence or malignant transformation. The condition has an excellent prognosis with adequate surgical intervention.

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