ORIGINAL RESEARCH PAPER

General Surgery

KEY WORDS: Mesenteric cyst; General Surgery; Gastrointestinal Surgery

GIANT MESENTERIC CYST

Nritya Nair* Intern, Seth GS Medical College and KEM Hospital, Mumbai, Maharashtra , India, 400012. ORCID ID: 0009-0000-2259-2279. *Corresponding Author

Rajesh Jaywant More Head of the Department of General Surgery, Bharatratna Dr. Babasaheb Ambedkar Municipal General Hospital, Kandivali West, Mumbai, Maharashtra, India, 400067.

Shermeen Rajesh More Intern, Seth GS Medical College and KEM Hospital, Mumbai, Maharashtra, India, 400012.

ABSTRACT

Mesenteric cysts are rare benign tumours, commonly located in the head and neck in children but rarely, they may be seen in the peritoneal cavity. The patient, a male in his early thirties with no comorbidities, presented with pain in abdomen and fullness for 4 weeks not associated with fever, vomiting or constipation. On CT a 17.5 x 20 x 12 cm multiloculated fluid density lesion with few locules showing thin peripheral enhancement was noted in the pelvis. The patient underwent an exploratory laparotomy with cyst excision and resection anastomosis of the sigmoid colon. The diagnosis of mesenteric cyst was confirmed on histopathological examination.

INTRODUCTION

Mesenteric cysts are rare, benign intraabdominal tumours that affect people of all ages, with a female-to-male ratio of 2:1 and documented incidences of 1/100,000 in adults and 1/20,000 in children [1]. The etiology is believed to be a developmental defect or primary malformation of the efferent lymphatic pathways resulting in dilatation of the proximal channels. Blockage of the lymphatic system as a result of previous pelvic surgery, trauma, pelvic inflammatory disease, infection, endometriosis, or neoplasia have been suggested as contributing factors [1].

While they may occur in any part of the mesentery, they most frequently originate from the mesentery of the small bowel (ileum: 60%) and mesocolon (ascending colon: 24%).

Patients of any age may develop mesenteric cysts although children under the age of 15 account for about one-third of instances. It may present as an acute abdomen, with unspecific abdominal symptoms or an incidental finding [1].

CASE PRESENTATION

The patient, a male in his early thirties with no comorbidities, presented with dull, aching pain in the abdomen and fullness for 4 weeks. Both were aggravated by food intake. He denied any history of vomiting, constipation, trauma or previous abdominal surgery.

On examination he was a febrile with a pulse of 80 beats per minute and blood pressure of 130/90 mm of Hg. Examination of the abdomen showed a palpable, non-tender lump in the right lumbar region, 10cm by 10 cm in size, soft in consistency and moving with respiration. No thrill or pulsation impulse were felt.

INVESTIGATIONS

A CT of the abdomen and pelvis revealed a 17.5 x 20 x 12 cm multiloculated fluid density lesion, with a few locules showing thin peripheral enhancement noted in pelvis on either side of bladder, rectum- superiorly extending to the epigastric region, displacing the bowel loops. No other abnormalities were seen.

Blood investigations
Hb: 14g/dl

WBC: 5.9k/mm3

Platelets: 2.6 lakh/mm3

Na: 138

K: 4.5

Cl: 10.6

LFT
Bilirubin: 6.5 gm%

SGOT/ SGPT/ALP: 13/18/71

Total protein: 6.5 gm%

Albumin: 4.2 gm%

PT/INR: 14/1.0

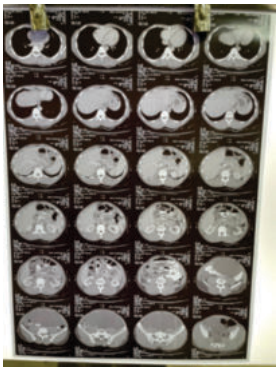

Fig. 1 CT scan of abdomen and pelvis

Fig. 2 CT scan of abdomen and pelvis

DIFFERENTIAL DIAGNOSIS

The vague presentation of the patient along with the abdominal mass could have been associated with a variety of pathologies. To discern the cause, imaging with ultrasonography, CT and MRI was performed.

One potential cause for these symptoms is a simple mesothelial cyst which appears on CT as a fluid filled mass without visible septations or cyst walls, and exhibit fluid signal on all pulse sequences. Sonography is notable for an anechoic mass without acoustic enhancement or discernible cyst wall or septations [2].

Another possible cause for these symptoms could be a pancreatic pseudocyst, resulting as a complication of acute or chronic pancreatitis and consist of a localized, amylase and pancreatic enzyme rich fluid collection that is surrounded by a thick fibrous wall without epithelial lining. CT imaging that reveals a round, thick walled, fluid-filled cyst adjacent to the pancreas in a patient with a history of acute or chronic pancreatitis is diagnostic. MRI provides improved characterization of fluid collections and cyst debris while sonography shows a thick-walled cyst [2]. This was considered an unlikely as there was no previous history suggestive of pancreatitis.

Other differentials for an intra-abdominal cystic mass includes an enteric duplication cyst, a cystic mesothelioma, a cystic spindle cell tumour and a cystic teratoma. However, conclusive diagnosis of a mesenteric cyst can only be made on histopathological examination with characteristic endothelial-lined cysts, myofibroblastic proliferation, and xanthogranulomatous changes [2].

TREATMENT

After initial management with antibiotics and fluids for three days, he underwent an exploratory laparotomy with cyst excision and resection anastomosis of sigmoid colon was done. Approximately 5cm of the sigmoid colon was also removed followed by anastomosis, placement of a pelvic abdominal drain and wash.

Histopathological examination confirmed the diagnosis of mesenteric cyst.

The patient's recovery was uncomplicated and he was discharged five days later.

Fig. 3 Midline incision showing the cyst

Fig. 4 Midline incision showing the complete cyst and bowel loops

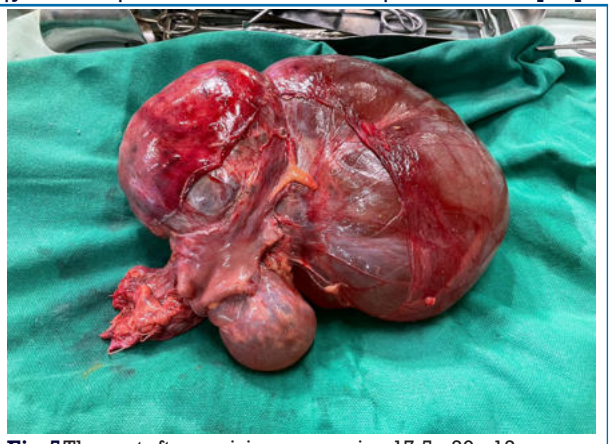

Fig. 5 The cyst after excision, measuring 17.5 x 20 x 12 cm

DISCUSSION

Because of their size and location, mesenteric cysts are frequently asymptomatic and are incidental findings during regular imaging. Acute or chronic nonspecific abdominal discomfort (55%-81%), a palpable mass (44%-61%), abdominal distension (17%-61%), as well as nausea and vomiting (45%), constipation (27%), and diarrhoea (6%) are the most common symptoms [1,3].

While clinical examination, a complete history, routine blood tests, and radiological investigations are mainline investigations that can guide one to the provisional diagnosis of a mesenteric cyst, it must ultimately be confirmed by histology [1].

Upon review of similar cases, most follow a similar line of management- surgical excision [5,4]. However, recurrence frequently occurs due to incomplete excision or disruption of collateral lymphatics [1,6]. Laparoscopic excision is the gold standard and should be used in case total enucleation is impossible or in case of malignant degeneration. If complete enucleation is not possible then marsupialisation is an alternative [7]. Deroofing, drainage, and partial cyst removal are other forms of treatment. These treatments have a higher propensity for recurrence and are, therefore, rarely recommended [1].

As in this case, localised resection of the intestine or surrounding structures may be required to excise the cyst en bloc [8].

Another approach successfully attempted in a symptomatic, febrile patient with a suspected mesenteric cyst involved initial conservative management followed by elective laparotomy to excise the cyst 9 months after initial presentation. This was done to avoid emergency surgery and to allow for the possibility of spontaneous regression [9].

COMPLIANCE WITH ETHICAL STANDARDS

Written, informed consent has been obtained from the patient for submission of the case report to the journal and publishing their data and photographs.

CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. Nritya Nair, Dr. Rajesh More and Shermeen More declare that they have no conflict of interest.

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