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RECURRENT INFECTED MESENTERIC CYST : A RARE CAUSE OF SURGICAL ABDOMEN

General Surgery

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ABSTRACT

Mesenteric cysts are rare intra-abdominal benign tumors whose etiology and classification are still controversial. They are the rarest variety within the abdominal cysts and because of both its low incidence and the mistaken belief that they are trivial cysts without apparent symptoms, have contributed to their scarce knowledge. Depending upon their size and location, these cysts are rarely symptomatic and thus are detected incidentally during routine imaging. Laparoscopy is the technique used as a first option, nowadays. Enucleation of the cyst by laparotomy or laparoscopy is curative. Aspiration alone has a high rate of recurrence.

KEYWORDS

Mesenteric cysts, causes of acute abdomen, intra abdominal benign cysts.

INTRODUCTION:

Mesenteric cysts are rare intra-abdominal benign tumors whose etiology and classification are still controversial.1 They are the rarest variety within the abdominal cysts and because of both its low incidence and the mistaken belief that they are trivial cysts without apparent symptoms, have contributed to their scarce knowledge.2 They have a reported incidence of 1/100,000 in adult and 1/20,000 in children and a female to male ratio of 2: 1.3 They are usually found in the mesentery of small bowel (60%) or colon (40%).4 Depending upon their size and location, these cysts are rarely symptomatic and thus are detected incidentally during routine imaging. Symptomatic cases may present with acute or chronic vague abdominal pain (55-81%), a palpable mass (44-61%), abdominal distension (17-61%), nausea and vomiting (45%), constipation (27%) or diarrhea (6%).5

Case Presentation:

A 41 year old man with history of previous abdominal surgery 11 years back, presented to the emergency room, in G.B. Pant hospital, Portblair , with complaints of severe abdominal pain in left upper quadrant and left flank for 12 hours. The abdominal pain was colicky in nature and started soon after intake of water in the morning. It had minimal improvement after analgesic treatment. Patient also complained of mild low grade fever for past 2 days. He also complained of vague fullness and dragging sensation in left side of umbilicus and left loin region since past 2 months. There was no history of nausea, vomiting or loose stools. Patient gave history of undergoing an abdominal surgery for a lump in abdomen, 11 years ago, when he had similar complaints of abdominal pain and fever. The intra-operative details of his previous surgery revealed that there was a cyst in the mesentery of jejunum of size 3 X 2 cm with white milky cream-like fluid inside the cyst. A probable diagnosis of an infected mesenteric cyst was made intra-operatively. The records of the histopathological examination of the cyst was not available with the patient.

Physical examination of the patient revealed pulse rate of 104 beats per minute. Blood pressure was recorded to be 110/78 mm Hg in right arm supine position. Body temperature 37.6 degree Celsius. On examination of abdomen, it was soft. There was no guarding or rigidity. There were no signs of peritonitis. There was localized tenderness in left lumbar region and around umbilicus in the left side. There was no obvious mass palpable. Scar of left paramedian incision for previous abdominal surgery was noted.

Routine hemogram of the patient revealed hemoglobin levels of 11.6g/dl and total White blood cell counts of 12,060 cells/mm3. Neutrophils 79.4%; Lymphocytes 11.3%. Biochemistry: Blood Glucose 120 mg/dl, Blood Urea 15 mg/dl, Serum Creatinine 0.71 mg/dL, Sodium 140 mEq/L, Potassium 4.3 mEq/L. Coagulation profile: Prothrombin Time 17.9 seconds; INR 1.32; APTT 26.5 seconds.

Abdominal ultrasound was asked for which showed liver of normal size and morphology with echostructure preserved. Gallbladder, pancreas, spleen and both kidneys in normal size, morphology, and echostructure. No lymphadenopathy. No free fluid. Left paramedian cyst measuring 4 cm in size with echogenic content inside was identified.

A contrast enhanced CT scan of abdomen was done to aid in the diagnosis. CT showed a well defined , smoothly marginated, thick walled hypodense lesion in the left paramedian location, in the left hypochondrium. The lesion measured 6 X 5.3 X 4 cm, 65.5 ml volume. The lesion was thick walled with areas of fatty attenuation. Homogenous low level internal debris with fat-fluid levels were visible. Inflammatory reaction of mesentery was seen with fat stranding. Features were suggestive of infected lipoma or residual-recurrent dermoid in the scan. (Figure 1).

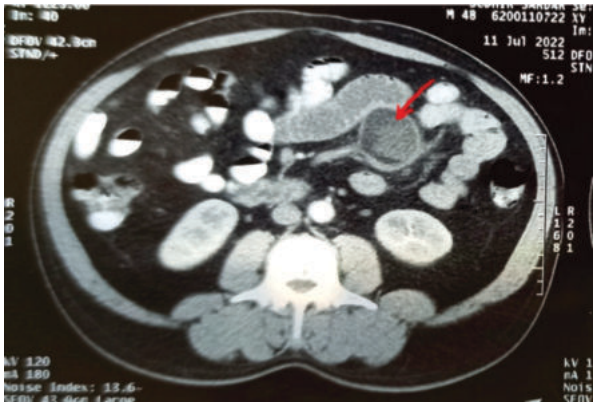

Figure 1. CECT scan of abdomen showing well defined , smoothly marginated, thick walled hypodense lesion, suggestive of infected lipoma or residual-recurrent dermoid . (Red arrow).

Diagnostic laparoscopy was planned for the patient as there was uncertainity in the diagnosis. Under general anaesthesia , laparoscopic camera port was inserted through a supraumbilical incision. But dense omental adhesions were visible, in the left paramedian region,

probably due to previous abdominal surgery. So the decision to convert it into an exploratory laparotomy was made. Midline exploratory laparotomy incision was given. Dense adhesions were separated slowly. On exploring the gut, a large cystic lesion of size around 8 X6 cm was found in the mesentery of jejunum, around 80cm from duodeno-jejunal junction. (Figure 2).

Figure 2. A large cystic lesion in the mesentery of jejunum; mesenteric cyst

The cyst was slowly enucleated ,by dissecting it off from the underlying blood vessels of the mesentery. Fragile veins were ligated and hemostasis was attained. Rest of the gut was normal. White milky cream-like fluid was present inside the cyst. (Figure 3)

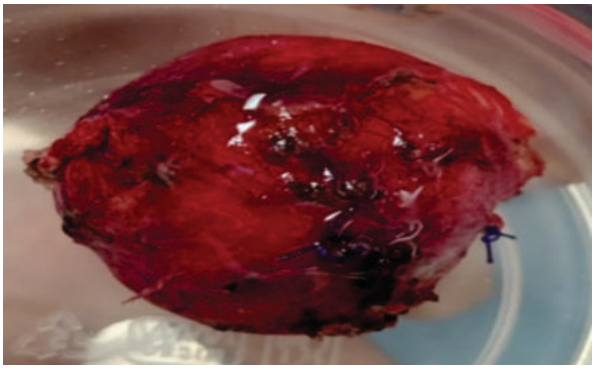

Figure 3. Enucleated mesenteric cyst.

This cystic lesion was diagnosed on routine histopathological examination and was reported as: Fibroconnective tissue with presence of a cystic cavity without epithelial lining, proteinaceous and lymphatic content and with the presence of histiocytes and polymorphonuclear cells. Features were suggestive of a chylolymphatic mesenteric cyst. The post operative recovery was uneventful and he was discharged on the fifth post operative day. He was gradually lost to follow up.

DISCUSSION:

The most common non-neoplastic mesenteric cysts are termed mesothelial cysts on the basis of the ultrastructure of the cells lining the cyst. The cysts contain chyle or a clear serous fluid. Mesenteric cysts can be classified into 4 types: Chylolymphatic, enterogenous, urogenital remanant and dermoid cysts. Although mesenteric cysts are rare, chylolymphatic cysts are the most common variety, probably arising from congenitally misplaced lymphatic tissue that has no efferent communication with the lymphatic system; most frequently in the mesentery of ileum. The thin wall of the cyst ,which is composed of connective tissue lined by flat endothelium, is filled with clear lymph or, less frequently chyle. They are usually unilocular, solitary cysts that has a blood supply that is independent of adjacent intestine and thus enucleation is possible without the need for resection of gut.

Enterogenous cysts are derived either from a diverticulum of the mesenteric border of the intestine that has become sequestered from the intestinal canal during embryonic life, or from duplication of the intestine. An enterogenous cyst has a thicker wall than a chylolymphatic cyst and it is lined by ciliated mucous membrane. The content is mucinous and either colourless or yellowish brown as a result of past hemorrhage. The wall of an enteric duplication cyst and the bowel with which it is in contact have a common blood supply, consequently, removal of the cyst always entails resection of the related portion of the intestine.5

A mid abdominal mass may be palpable on physical examination. The diagnosis can usually be made preoperatively with ultrasonography or CT scan. 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 recurrence. In those cases in which cyst is not completely excised, the contents and the internal architecture of the cyst wall must be carefully inspected and the cyst wall examined histologically to rule out a neoplastic etiology.6

CONCLUSION:

The type of surgery depends on the size of the cyst, its location in the peritoneal cavity and the experience of the operating surgeon. Laparoscopy is the technique used as a first option, nowadays, since results similar to laparotomy have been achieved but with less post operative pain, lesser comorbidities and a short postoperative stay in the hospital. If surgical resection was not possible, another option available is subtotal or partial resection with marsupialization and sclerosis of the endothelium cyst. But chances of recurrence in this case is higher when compared to complete excision or enucleation of the cyst.7

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Ethics Committee Approval: Approval was obtained from the institutional ethics committee.

Consent: Written informed consent was obtained from the patient for the publication of this case report and accompanying images.

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