



RARE CASE OF INFECTED MESENTERIC CYST WITH POST OPERATIVE DUODENAL FISTULA- A CASE REPORT

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ABSTRACT

Mesenteric Cysts are rare intra-abdominal tumors occurring in the mesentery of intestine, may contain chyle or serous fluid, and have variable presentations[1]. One such case was managed at our institution. A 70-year-old male patient presented with history of mass per abdomen associated with pain for 10 days. On clinical examination palpable mass of size approximately 10*10cm in the epigastric, umbilical region, along with an incisional hernia at the same site. CECT abdomen revealed a collection of size 13*12*7cm in mesentery extending from epigastric to umbilical region, with a midline defect in the rectus of size 10*7cm. Emergency exploratory laparotomy was performed and cyst identified, oozing of pus was noted. Marsupialization of cyst cavity was done. Postoperatively, bilious output noted through the RFD. Oral contrast CT revealed contrast leak from D3 of duodenum, with fistulous communication into the cyst. Under fluoroscopic guidance, NJ tube was passed beyond the site of fistulous communication. Subsequent drop in RFD output was observed. Patient was followed up for 6 months, subsequent course was uneventful.

KEYWORDS : Mesenteric cyst, Incisional hernia, Marsupialization, Duodenal fistula

INTRODUCTION:

In 1907, the Italian anatomist Benevieni first reported a mesenteric cyst following an autopsy on an 8-year-old girl. In 1842, von Rokitansky described a chylous mesenteric cyst. Gairdner published the first report of an omental cyst in 1852. Tillaux performed the first successful surgery for a cystic mass in the mesentery in 1880^[2]. Cysts may occur in the mesentery of small intestine (60%) and colon (40%), may contain chyle or serous fluid. Cysts most commonly occur in adults with a mean age of 45 years. The etiology of such cysts remains unknown but several theories regarding their development exist. Due to the rarity of this entity and the lack of specific symptoms, correct preoperative diagnosis is difficult. Complete surgical excision of the cyst is the treatment of choice, although Marsupialization is done for large cysts. Knowledge of these lesions is important due to the various complications associated with suboptimal surgical management^[3].

Here we report one such case, of a 70-year-old male managed at our institution.

Case Report:

A 70-year-old male patient presented to ER with complaints of abdominal pain, distension and constipation for 4 days and History of Vomiting - 3-4 episodes/day, non-projectile, bilious for 2 days. Abdominal pain was progressive and diffuse in nature, non-radiating, non-referred.

No History of Fever/Malena/Decreased urine output/Jaundice
No History of Loss of Weight / Loss of Appetite.

No History of Trauma; No similar complaints in the past.

No known comorbidities.

History of laparotomy for similar complaints 6 years ago, records not found.

On Examination -

Vitals were within the normal range; Per Abdomen - Abdomen was distended with diffuse tenderness and guarding localized to epigastric, both hypochondrial and sub umbilical regions, bowel sounds were faintly appreciable. Per Rectal examination revealed a roomy rectum with gloved finger

stained with normal color soft stools.

Investigations:

Blood profile	HB- 10.8 g/dl WBC- 13,300/mm3 PLT- 4.2 lakh/mm3 Urea-35.9mg/dl Creatinine-0.67 Total bilirubin-0.61 Direct bilirubin-0.21
ULTRASONOGRAPHY OF ABDOMEN	Well defined loculated collection m/s 13*12*7cm noted in mesentery extending from epigastric to hypogastric region s/o infected mesenteric cyst, collection causing anterior displacement of bowel loops.
CECT ABDOMEN	Well defined loculated, hypodense collection m/s 13*12*7cm noted in mesentery extending from epigastric to hypogastric region s/o infected mesenteric cyst, collection causing anterior displacement of bowel loops, with midline defect in rectus sheath of size 10*7 cm.
HISTOPATHOLOGY REPORT	Cut sections of cyst revealed dirty brown fluid. Sections from cyst showing mucosa lined by intestinal type of epithelium. Lamina propria showing glands and mild chronic inflammation. Muscularis mucosa, submucosa, muscularis propria and serosa show transmural mild chronic inflammation with congestion. S/O Enterogenous type of Mesenteric cyst.

ORAL CONTRAST CT ON POD-2	Evidence of air pockets within the mesentery on right side with contrast leak likely from D3 segment of duodenum? fistulous communication with the cyst cavity.
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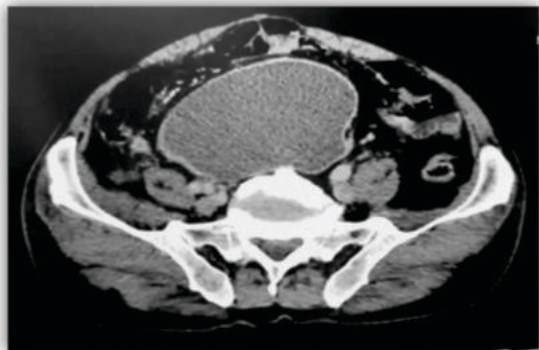


Figure 1 . CECT abdomen showing large mesenteric cyst

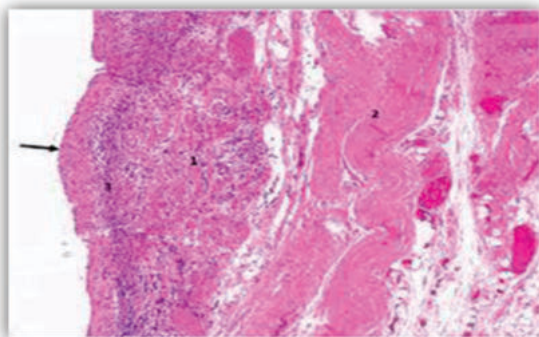


Figure 2 . Histopathology microscopic photo of mesenteric cyst

DISCUSSION:

A mesenteric cyst is defined as any cyst located in the mesentery of the gastrointestinal tract from duodenum to rectum. It may or may not extend into the retroperitoneum, which has a recognizable lining of endothelium or mesothelial cells^[4].

Mesenteric cysts are classified as -

- 1) Chylo lymphatic type (most common)
- 2) Enterogenous type
- 3) Urogenital type (usually retroperitoneal)
- 4) Dermoid type

These cysts usually occur in adults, with a mean age of 45 years, and are twice as common in women as in men^[5]. Depending on the size of the cyst, patients may present with complaints of abdominal pain, fever, and emesis. A midabdominal mass may be palpable on examination of the abdomen. The diagnosis can usually be made preoperatively with ultrasonography or CT.

When they are of large size, they present with Tillaux's sign (move freely at right angles to the attachment of the mesentery). Other presentations include recurrent attacks of abdominal pain with or without vomiting occurring due to impaction of food bolus in a segment of bowel narrowed by the cyst or possibly from torsion of the mesentery. Acute abdominal catastrophe in such cases could be, due to -

- Torsion of mesentery
- Cyst Rupture
- Hemorrhage into the cyst

- Infection into the cyst^[6]

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^[7].

If enucleation or resection is not possible because of the size of the cyst or because of its location deep within the root of the mesentery, the third option is partial excision with marsupialization of the remaining cyst into the abdominal cavity. Approximately 10% of patients require this form of therapy^[8].

Once removed, mesenteric cysts rarely recur, and patients have an excellent prognosis. Malignant cysts occur in less than 3% of cases^[9-12].

Present reported case was managed by exploratory laparotomy with the following findings-

1. Mesenteric cyst of size 12*10*8 cm in midline.
2. Multiple adhesions to surrounding mesentery and bowel loops.

Cyst wall was opened and around 100ml pus drained. All adhesions were cleared, thorough wash given, specimen for biopsy taken, and marsupialization done.

On post-operative day 2, patient developed bilious output through the Right flank drain. Oral contrast ct showed contrast leak from D3, with fistulous communication into the cyst cavity. Under fluoroscopic guidance, Naso- jejunal tube was inserted, with tip passed beyond D3. Patient was managed on injectable antibiotics, analgesics, and was put on NBM for another 4 (pod 7) days post NJ tube insertion. Subsequent drop in the bilious output in RFD was observed, NJ feeds were started on pod 8 and NJ tube removed on pod 12. Patient was discharged on pod 15 after complete suture removal and was tolerating oral feeds at the time of discharge.

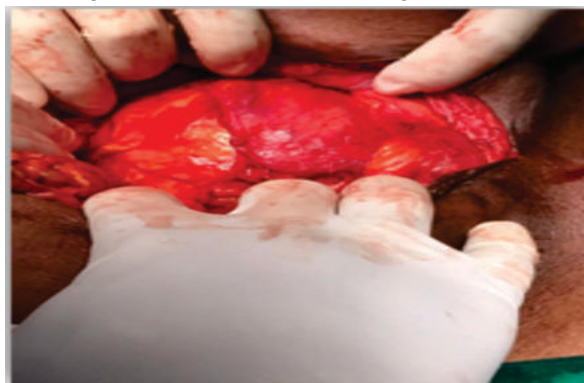


Figure3. Intraop photo of large mesenteric cyst



Figure 4 . Intraop photo of infected mesenteric cyst

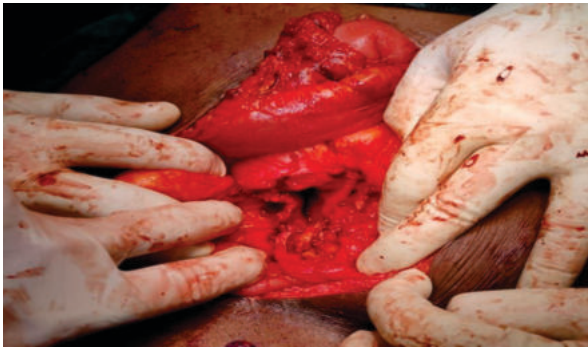


Figure 5. Marsupialization

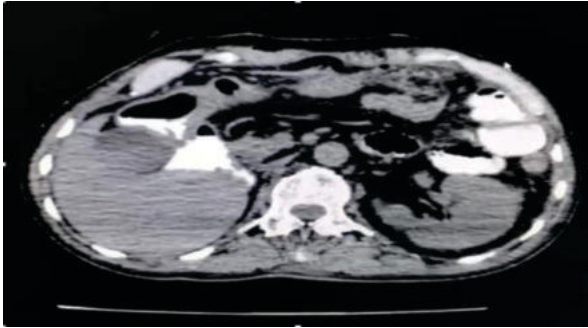


Figure 6. Oral contrast CT showing contrast leak from D3 into cyst cavity

CONCLUSION:

The present case is being reported, as infected mesenteric cysts are rare in occurrence, and this case presented with a unique challenge of duodenal fistula. It is a diagnostic battle, as such cysts are often small in size and go unnoticed on routine imaging and work up. Therefore, when the index of suspicion is high - Diagnostic laparoscopy is considered to be the most ideal modality for both diagnosis and treatment. The large size of the cyst, along with multiple adhesions led to the operative decision of marsupialization. Post operative duodenal fistula was tackled in a novel non operative method of placing a Naso- jejunal tube, which not only helped in decreasing the fistulous output, but also served as a route for starting enteral feeds.

Patient was followed up for a period of 6 months, during which he developed no new symptoms.

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