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MESENTERIC CYST AS A RARE CAUSE OF ACUTE INTESTINAL OBSTRUCTION - A CASE REPORT

General Surgery

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ABSTRACT

Mesenteric cysts are rare intra abdominal tumours having variable presentations . One such was encountered at our institution , where a 70 year old male presented to ER(Emergency Room) with complaints of abdominal distension and pain for 4 days ; On examination of the abdomen , diffuse tenderness with guarding localised to the upper abdominal quadrants was noted. Imaging revealed dilated small bowel loops , with twist in mesentery noted just distal to DJ(Duodeno-Jejunal) flexure. Emergency Exploratory Laparotomy was planned and showed 2 mesenteric cysts , 10 and 20 cm from DJ flexure - for which Resection and End to End anastomosis was done. Resected bowel specimen was sent for Histopathological examination , and showed transmural chronic inflammation with serosal congestion - suggesting Enterogenous type of Mesenteric cyst.
Patient was followed up for 6 months and the course was uneventful.

KEYWORDS

Mesenteric Cyst ; Enterogenous Type ; A

INTRODUCTION :

Mesenteric cysts are rare surgical conditions occurring approximately in 1/200,000–350,000 hospital admissions.[1] Italian anatomist Benevenni first described this entity while performing an autopsy in an 8-year-old boy in 1507,while Rokitansky published the first accurate description of a chylous mesenteric cyst in 1842 . Tillaux performed the first successful surgery for a cystic mass in the mesentery in 1880.[2]

Owing to its variable presentation and non-specific clinical symptoms and signs, they are discovered incidentally during an abdominal radiological examination for other reasons or during exploratory laparotomy.

The aetiology 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. Knowledge of these lesions is important due to the various complications associated with suboptimal surgical management. 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 since 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.
Known Hypertensive - controlled with medication - since 4 years.

On Examination - Vitals were within the normal range ; Per Abdomen - Abdomen was distended with diffuse tenderness and guarding localised to epigastrium and both hypochondrial regions with Borborygmi bowel sounds. Per Rectal examination revealed a roomy rectum with gloved finger stained with normal colour soft stools.

INVESTIGATIONS :

BLOOD PROFILE	HB - 12.2 gm/dl WBC - 9,280/mm3 PLC - 3.80 lakh/mm3 RBS - 174 mg/dl Serum creatinine - 0.9mg/dl Total bilirubin - 0.8 mg/dl
ULTRASONOGRAPHY OF ABDOMEN AND PELVIS	Multiple dilated small bowel loops in abdomen and pelvis with maximum diameter of 4.5 cms and ileal loops showing vigorous peristalsis with minimal interbowel free fluid . S/O Acute Small Bowel Obstruction.
ORAL CONTRAST CT ABDOMEN AND PELVIS	Multiple dilated small bowel loops (jejunal and ileal) with air fluid levels noted-maximum diameter of 4.5 cm in distal ileal loops. Contrast opacification noted only till mid jejunal loops and not reaching ileal loops. Mesenteric twist noted just distal to DJ flexure. Transition point at the site of the mesenteric twist and collapsed distal bowel. S/O Acute Small Bowel Obstruction
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.

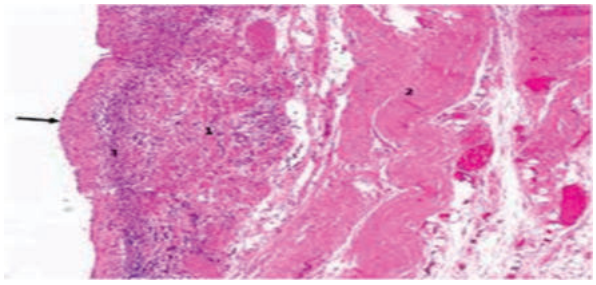

Figure 1 : Histopathology microscopic picture of Mesenteric cyst.

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.3

Mesenteric cysts are classified as -

1) Chylolymphatic type (most common)
2) Enterogenous type
3) Urogenital type (usually retroperitoneal)
4) Dermoid type

They are more common in adults with a mean age of 45 and have preponderance in females.4 Mesenteric cysts can be simple or multiple, unilocular or multilocular ; They may contain hemorrhagic, serous, chylous, or infected fluid and can range in size from a few millimetres to few centimetres in diameter. However, at times may be so large that it may mimic tubercular ascites.5

They are often asymptomatic and found incidentally while patients are undergoing work-up or receiving treatment for other conditions, such as appendicitis, small-bowel obstruction, or diverticulitis ; Although patients may present with lower abdominal pain and symptoms that are frequently associated with other abdominal conditions. The symptoms are variable and non-specific and include pain (82%), nausea and vomiting (45%), constipation (27%), and diarrhoea (6%). An abdominal mass may be palpable in up to 61% of patients.6

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 vomitings 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
- Haemorrhage into the cyst
- Infection into the cyst 7

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 intestine. It has a thicker wall when compared to chylolymphatic cyst and is lined by mucous membrane. The content is mucinous and may be either colourless or brownish colour due to any past internal haemorrhage into it.

The muscle in the wall of the cyst and bowel from which it is arising will have a common blood supply unlike chylolymphatic cyst where blood supply of the cyst in independant of the blood supply to the bowel.8

The treatment of choice is complete excision to avoid recurrence and possible malignant transformation. Bowel resection may be necessary in cases where cysts are close to bowel structures or involve blood vessels that supply the bowel. Surgical modalities encompass either Laparoscopic or Open method of surgery - with patient advantage of early return to work , in the former.

Once removed, mesenteric cysts rarely recur, and patients have an excellent prognosis. Malignant cysts occur in less than 3% of cases. 9 - 13 Present reported case was managed by Emergency exploratory Laparotomy with , intraoperative findings -

- Dilated jejunal and proximal ileal loops with twisting of mesentery between the cysts ; Distal ileal and large bowel loops were collapsed.

- 2 Mesenteric cysts were noted -
- First one noted , 10 cm distal to DJ flexure of size 3x3 cm in largest dimension.
- Second one noted , 20 cm distal to DJ flexure of size 5x5 cm in largest dimension.

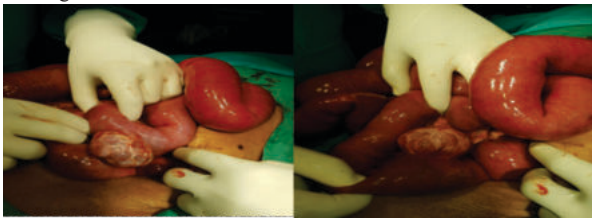

Figure 2 & 3 : Mesenteric cysts noted 10 and 20 cm distal to DJ flexure

CONCLUSION :

The present case is being reported , as mesenteric cysts seldom present as an Acute abdomen.

It is a diagnostic battle , as such cysts are often small in size and go unnoticed on routine imaging and workup. Therefore , when the index of suspicion is high - Diagnostic laparoscopy is considered to be the most ideal modality for both diagnosis and treatment.

This patient was approached with Emergency Laparotomy and a resection of involved jejunal bowel with end to end jejunojejunal anastomosis was performed and patient has an uneventful postoperative course.

On Follow up for 6 months postoperatively , the patient showed no new symptoms and there was an uneventful recovery.

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