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# Mesenteric Cyst of Sigmoid mesocolon: Report of aRare Case and Review of literature

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***Abstract:***
***Introduction:*** *Mesenteric cysts are benign intra-abdominal lesions which are rare. They have various clinical presentations, most commonly found in the mesentery of small intestine. Treatment includes surgical excision of the cyst with or without bowel resection and anastomosis.*
***Case Report:*** *A 9-year-old girl presented with a lump in the abdomen which was evaluated by USG and CT scan. It turned out to be a huge cyst (19x8 cm) in the mesentery of sigmoid colon which was excised along with the sigmoid colon and Colo-colic anastomosis was done.*
***Conclusion:*** *Abdominal swellings in children tend to be congenital.Mesenteric cysts have diverse presentations and arise from a variety of sites. They can be successfully managed by complete excision, with or without bowel resection and anastomosis. Laparoscopic excision of the cysts is becoming an increasingly popular option.*
***Key words:*** *Mesenteric cyst; Sigmoid Mesocolon*

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## I. Introduction

Mesenteric cysts are benign intra-abdominal lesions which are rare. They have various clinical presentations, most commonly found in the mesentery of small intestine. Although majority of mesenteric cysts are congenital, 40% of them present during adulthood, most commonly in 4th decade [(2,3,4)]. Overall incidence is estimated to be <1/100000 [(5)]. Its aetiology varies from failure of mesenteric fusion to lymphatic malformation to trauma [(5)]. Majority of the cysts are asymptomatic and found incidentally on some radiological investigations or during the management of their complications. However, patients may present either with mobile abdominal mass, pain, vomiting or low back ache. Pain typically arises secondary to rupture, torsion or mass effect. On physical examination, palpable masses are mobile in a single direction perpendicular to the line of attachment of the mesentery, called as Tillaux sign. Thus, they are not freely mobile swellings unlike Omental cysts. A proportion of mesenteric cysts have been found to originate from the transverse mesocolon (24%) and retroperitoneum (14.5%) also[(1)].In children, resection and anastomosis may be required in up to 50-60% of cases.[(7)] Very few cases have reported cysts present in the mesentery of the descending colon, sigmoid or rectum (around 1%), including our case.[(8)]. Identification of a solid component should raise suspicion for malignancy - typically sarcoma or rarely adenocarcinoma.

## II. Case Report

A 9-year-old girl presented with complaints of painless distension of abdomen for 2 years, loss of weight and appetite for 2 months, No history of vomiting/ loose stools / constipation/ fever/ cough/ TB / or trauma. On general examination, vitals were within normal limits. Other systems examination was normal. On local examination- Abdomen was soft and protuberant. It was not tender. A mobile mass was palpable, it was 15 x 8 cm, extending horizontally from right lumbar region to left lumbar region, vertically from umbilical region to hypogastric region. Swelling moved freely in all directions, all borders can be felt including the lower border.There was no visible peristalsis or pulsations.The swelling fell forward in knee-elbow position. It was dull to percussion; dullness was surrounded by resonance all around. Per rectal examination was normal. The mass clinically appeared to be a **mesenteric cyst** though mobility was not typical of the condition**.**

Ultrasonogram revealed a cystic lesion 19x8 cm extending from pelvis to just below epigastrium, with septations and internal echoes. Patient was taken up for laparotomy, with general anaesthesia, in supine position, Abdomen was opened with sub umbilical transverse incision and explored. A Cyst was found within the leaves of sigmoid mesocolon –size 18cm x 10x 8 cm. it was thick walled and yellowish brown in colour. It was adherent to the mesocolic border of sigmoid colon. Resection of sigmoid colon along with cyst and end–to-end anastomosis was done. Colo-colic end -to -end anastomosis done in two layers (all layer 2-0 chromic catgut and seromuscular interrupted 3-0 silk sutures). Thorough peritoneal lavage was given and wound closed in layers after keeping a pelvic drain. Post-operative period was uneventful. Specimen was sent for histopathology. Report: Enterogenous cyst, lined by columnar cells. Smooth muscle layer present in the wall.

**Figure no.1** : preoperative view of the swelling


**Figureno. 2:** ultrasonographic pictures

**Figure no. 3 :** intraoperative findings

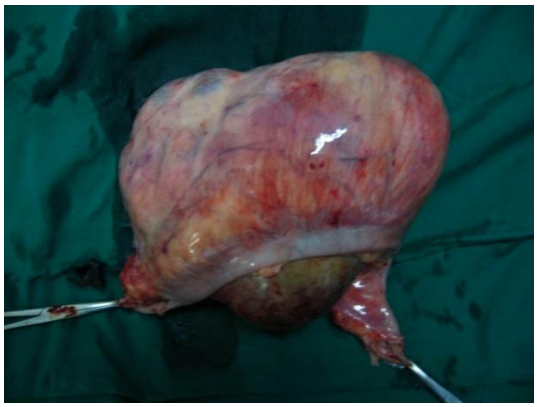

**Figure no 4:** excised specimen

**Figure no.5 :** post-operative wound

## III. Review Of Literature

In 1507, Italian anatomist Benevieni first reported a mesenteric cyst following an autopsy on an eight-year-old child.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

## IV. Discussion

There are several classifications of these formations, among which the one based on histopathologic features including 6 groups has been most commonly used: 1) cysts of lymphatic origin--lymphatic (hilar cysts) and lymphangiomas; 2) cysts of mesothelial origin--benign or malignant mesothelial cysts; 3) enteric cysts; 4) cysts of urogenital origin; 5) dermoid cysts; and 6) pseudocysts--infectious or traumatic aetiology**.**

| | |
|---|---|
| Cyst of lymphatic origin | Simple lymphatic cyst<br>Lymphangioma |
| Cyst of mesothelial origin | Simple mesothelial cyst<br>Benign cystic mesothelioma<br>Malignant cystic mesothelioma |
| Cyst of enteric origin | Enteric duplication cyst<br>Enteric cyst |
| Mucinous cystic neoplasms | Mucinous cystadenoma<br>Borderline malignant mucinous cystic neoplasms<br>Mucinous cystadenocarcinoma |
| Cyst of urogenital origin | |
| Miscellaneous neoplasms | Mature cystic teratoma (dermoid cyst)<br>Neuro endocrine carcinoma<br>Cystic spindle cell tumour |
| Nonpancreatic pseudocyst | Cyst of traumatic origin<br>Cyst of infectious origin |
| Non neoplastic cyst | Hydatid cyst<br>Mycotic cyst<br>Parasitic cyst<br>Tuberculous cyst<br>Cystic degeneration of lymph nodes and other tissues |

(6)

Ultrasound or CT is adequate for evaluating cystic lesions and delineating any solid components or septations. Majority of mesenteric cysts are located within the small bowel mesentery, are unilocular and do not have a solid component.

Treatment of any mesenteric cyst requires surgical excision if the patient is symptomatic or malignancy has not be ruled out. Cysts should be excised in total because enucleation, marsupialization, internal or external aspirations and drainage are associated with a high risk of recurrence. In children, resection and anastomosis may be required in up to 50-60% of cases.[(7)]

## V. Diagnosis

USG – in case of a painless enlargement - to exclude hydronephrosis. Needle aspiration combined with instillation of radio-opaque water-soluble contrast media. Barium meal and follow through-- smooth filling defect. Doppler study. Abdominal CT-scan – whether cyst is arising from other organ such as kidney, pancreas or ovary, to see the content of the cyst and, to plan the procedure. Radionuclide scanning of biliary tract excludes choledochal cyst (HIDA scan)

**Differential Diagnosis**

Intestinal duplication cyst, Ovarian cyst, Renal cysts,Omental cysts, Hydronephrosis, Hydatid cyst, Choledochal splenic cysts, pancreatic, Cystic teratoma,Ascites

**Complications**

Intestinal obstruction, Volvulus,Hemorrhage into cyst, infection, rupture, Cystic torsion, Obstruction of urinary and biliary tracts, Malignant transformation has occurred in adults but not in children

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