

Mesentric Cyst: A Rare Intra-Abdominal Tumor

Dr. Kamlesh Galani¹, Dr. Aneri Rathod², Dr. Ankur Modi³, Dr. Digvijaysinh Sindhav⁴

¹Associate Professor, CUSMC, Surendranagar

²3rd Year Surgery Resident, CUSMC, Surendranagar

³Senior Resident, CUSMC, Surendranagar

⁴1st Year Surgery Resident, CUSMC, Surendranagar

Abstract: Mesenteric cysts are rare benign intra-abdominal tumors with an incidence of 1 case per 250,000 hospital admission.¹ Because of variable and non-specific clinical symptoms and signs, they are discovered either accidentally during an abdominal radiological examination for other reason or during laprotomy for the management of one of the complications. The aetiology of such cysts remains unknown but several theories regarding their development exist. Complete surgical excision of the cyst is the treatment of choice. Due to the rarity of this entity and the lack of specific symptoms, correct pre-operative diagnosis is difficult. Knowledge of these lesions is important due to the various complications associated with suboptimal surgical management.

Keywords: Mesenteric cyst, chylolymphatic cyst, intra-abdominal tumor

1. Case Report

A 20 year old boy, residing at zamar presented with history of dull aching pain over paraumbilical region of five month duration, particularly after meals. There was no history of fever, vomiting, jaundice, maleana, haematemesis, bleeding per rectum, dysuria, haematuria, chronic cough, haemoptysis, bony pains, seizures or worm infestation. There was no family history of similar disease or any congenital anomaly.

On clinical examination vital parameters were found within normal limit with no pallor, icterus, pedal oedema, lymphadenopathy. Per abdomen examination revealed a well-defined oval shape, intra-abdominal lump, extending from left paraumbilical region towards right side, cystic in consistency, non-tender, with well-defined margins. It was slightly mobile from side to side.

Laboratory tests haemoglobin count of 14.6 gm% ,PCV OF 43.5%, WBC count of 4900/cm, and platelet count of 1,71,000/cm. His blood differential showed 56% neutrophils, 32% lymphocytes, 4% eosinophils, and no basophils. His liver function tests- total protien, total bilirubin in normal limit and SGPT 105.9 U/L ,ALP 139.68 U/L and urinalysis was within normal limits.

A chest radiograph showed no infiltrates in lungs. Ultrasound abdomen revealed an intra-abdominal cystic mass, measuring 6×5×3 cm in dimension, seen in pelvis, posterior to urinary bladder. Approx volume 50 ml. Lesion is thin walled. Few thin internal septa seen. No significant solid component seen. Based on clinical features and ultrasound study of abdomen diagnosis of “Mesenteric Cyst” was made. CECT abdomen was contemplated after USG abdomen, with findings of Evidence of lobulated nonenhancing cystic lesion is seen involving RIF region of mesentery anterior to iliac vessels. It measures about 04 X 6.7 X6.1 cm. No evidence of invasion of adjacent vital vascular structure is seen. Partial mesenteric twist(<180) is seen involving RIF mesentery without vascular

compromisation or bowel involvement. Few enlarged nodes are seen involving RIF mesentery. Largest one measures upto 1.5 X 1.1 cm.

Therefore, patient was prepared for exploratory laparotomy and excision of cyst with resection and Patient underwent exploratory laparotomy, which revealed a lobulated mesenteric cyst – Chylolymphatic cyst with chyle present at mesenteric border of ileal loop along with mesenteric lipoma covering majority portion of intestinal loop. No any other cyst found in any mesentery including sigmoid colon, trasverse colon, appendix. Mesenteric lymphnode enlarged from which lymphnode biopsy taken.



Figure 1: Intra operative picture

Volume 8 Issue 12, December 2019

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

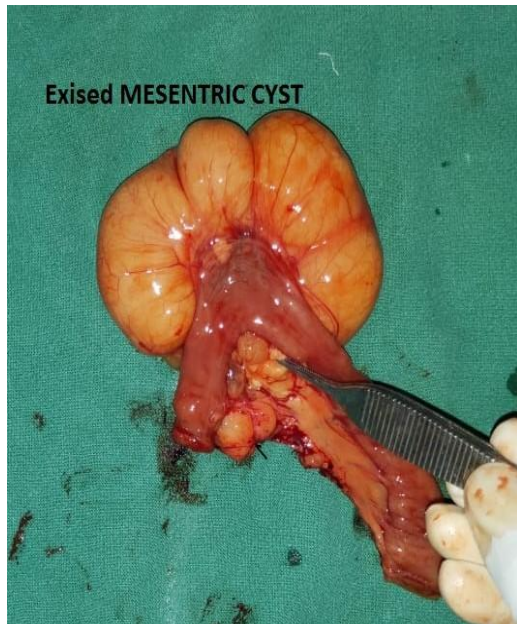


Figure 2: Excised Cyst

Post-operative period was uneventful. Cut section revealed multiloculated cyst with varying wall-thickness, filled with white fluid probably due to chyle in the cyst. Histopathological examination showed that cyst on cut section, milky white fluid came out. Inner surface is thin walled and multiloculated. Histopathological examination of lymph node shows no remarkable pathology and no evidence of metastatic malignancy or granuloma.

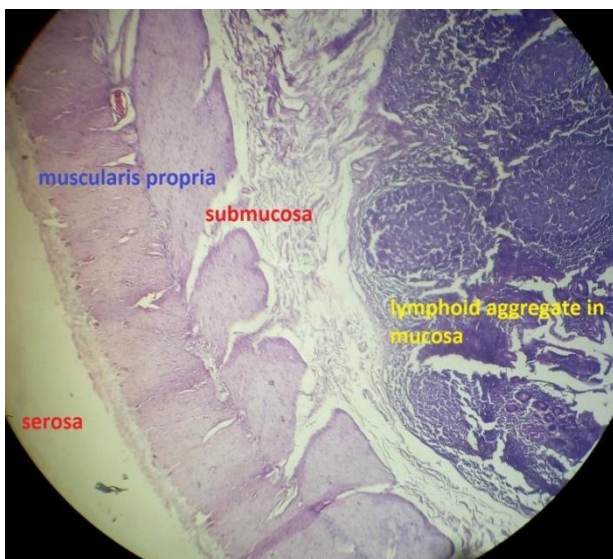


Figure 3: Histology of Mesenteric Cyst

2. Discussion

Mesenteric cysts are rare surgical condition occurring approximately in 1/200,000–350,000 hospital admission.² Italian anatomist Benevanni first described this entity performing an autopsy in an 8-year-old boy in 1507, while Rokitsky published the first accurate description of a chylous mesenteric cyst in 1842 and Tillaux performed the first successful surgery for a cystic mass in the mesentery in 1880.³

A mesenteric cyst is defined as any cyst located in the mesentery; it may or may not extend into the retroperitoneum, which has a recognizable lining of endothelium or mesothelial cell. Mesenteric cyst can occur anywhere in the mesentery of gastrointestinal tract from duodenum to rectum. In a review series of 162 patients, 60% of mesenteric cysts occurred in the small-bowel mesentery, 24% in the large-bowel mesentery, and 14.5% in the retroperitoneum while it was indefinite in 1.5% of cases.⁴ Mesenteric cysts can be simple or multiple, unilocular or multilocular, and they may contain hemorrhagic, serous, chylous, or infected fluid. They can range in size from a few millimetres to few cm in diameter, however, at times may be so large that it may mimic tubercular ascites.⁵

Exact aetiology of mesenteric cyst has yet to be ascertained, but failure of the lymph nodes to communicate with the lymphatic or venous systems or blockage of the lymphatics as a result of trauma, infection, and neoplasm are said to be contributing factors.⁶ The most accepted theory, proposed by Gross, is benign proliferation of ectopic lymphatics in the mesentery that lack communication with the remainder of the lymphatic system.⁷

Mesenteric cyst may occur in patients of any age. Approximately one-third of cases occur in children younger than 15 years. The cyst may present either as non-specific abdominal feature, as an incidental finding, or as an acute abdomen. 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.⁸

Mesenteric cyst should be evaluated with complete history, clinical examination, blood investigations and radiological investigations (X-ray abdomen erect, ultrasound abdomen (USG) and computed tomography (CT) scan in selected cases) to reach a provisional diagnosis. The diagnosis is proven on laparotomy and has to be histologically confirmed. Secondary complications associated with mesenteric cysts include volvulus, spillage of infective fluid, herniation of bowel into an abdominal defect, and obstruction.⁹ 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. Once removed, mesenteric cysts rarely recur, and patients have an excellent prognosis. Malignant cysts occur in less than 3% of cases.¹⁰

3. Conclusion

Chylous cysts represent a diagnostic challenge and they should be considered when a physician encounters an intraabdominal mass. Physical examination and imaging do not always provide a diagnosis and surgical management

should be advised due to the potential complications that may develop.

References

- [1] Miliras S., Trygonis S., Papandoniou A., Kalamaras S., Trygonis C., Kiskinis D. Mesenteric cyst of the descending colon: report of a case. *Acta Chir Belg.* 2006;106:714–716. [PubMed] [Google Scholar]
- [2] Al Haifi Mohammed B., Abdulsamad M.A., Juma Talib A. Laparoscopic excision of mesenteric cyst: case report. *Kuwait Med J.* 2007;39(2):167–169. [Google Scholar]
- [3] Mohanty S.K., Bal R.K., Maudar K.K. Mesenteric cyst – an unusual presentation. *J Pediatr Surg.* May 1998;33(5):792–793. [PubMed] [Google Scholar]
- [4] Saviano M.S., Fundarò S., Gelmini R., Begossi G., Perrone S., Farinetti A., Criscuolo M. Mesenteric cystic neof ormation: report of two cases. *Surg Today.* 1999;29(2):174–177. [PubMed] [Google Scholar]
- [5] Zamir D., Yuchtman M., Amar M., Shoemo U., Weiner P. Giant mesenteric cyst mimicking ascites. *Harefuah.* 1996;130(10):683–727. [PubMed] [Google Scholar]
- [6] Beahrs O.M., Judd E.S., Jr., Dockerty M.B. Chylous cysts of the abdomen. *Surg Clin North Am.* 1950;30:1081–1096. [PubMed] [Google Scholar]
- [7] Richard R.R. Mesenteric and omental cysts. In: Grosfeld J.L., O'Neill J.A. Jr., Coran A.G., Fonkalsrud E.W., editors. *Pediatric Surgery.* 6th ed. Mosby Elsevier; Philadelphia: 2006. pp. 1399–1406. [Google Scholar]
- [8] Prakash A., Agrawal A., Gupta R.K., Sanghvi B., Parelkar S. Early management of mesenteric cyst prevents catastrophes: a single centre analysis of 17 cases. *Afr J Paediatr Surg.* 2010;7:140–143. [PubMed] [Google Scholar]
- [9] Hassan M., Dobrilovic N., Korelitz J. Large gastric mesenteric cyst: case report and literature review. *Am Surg.* 2005;71(7):571–573. [PubMed] [Google Scholar]
- [10] Kurtz R.J., Heimann T.M., Beck A.R., Holt J. Mesenteric and retroperitoneal cysts. *Ann Surg.* 1986;203(1):109. [PMC free article] [PubMed] [Google Scholar]