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Pediatric Mesenteric Cyst - A Case Report

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Abstract: Mesenteric cysts are rare benign lesions presenting mostly commonly in the second decade of life. A case of 2 month old male child with abdominal distension and vomiting after every feed for a duration of two weeks is presented**.** The patient had complete and uneventful excision of the cyst**.**

Keywords: Mesenteric cyst, ectopic lymphatics

Introduction

Mesenteric cysts are rare, benign intra-abdominal lesions with an incidence of 1 in 27,000 to 1 in 250,000 hospital admissions.[1] It can occur anywhere in the mesentery from duodenum to rectum. The exact etiology remains unknown but the most accepted theory viz. Gross theory states that it is a benign proliferation of ectopic lymphatics lacking communication with the remaining lymphatic system.[2] Complete surgical excision is the treatment of choice.[1]

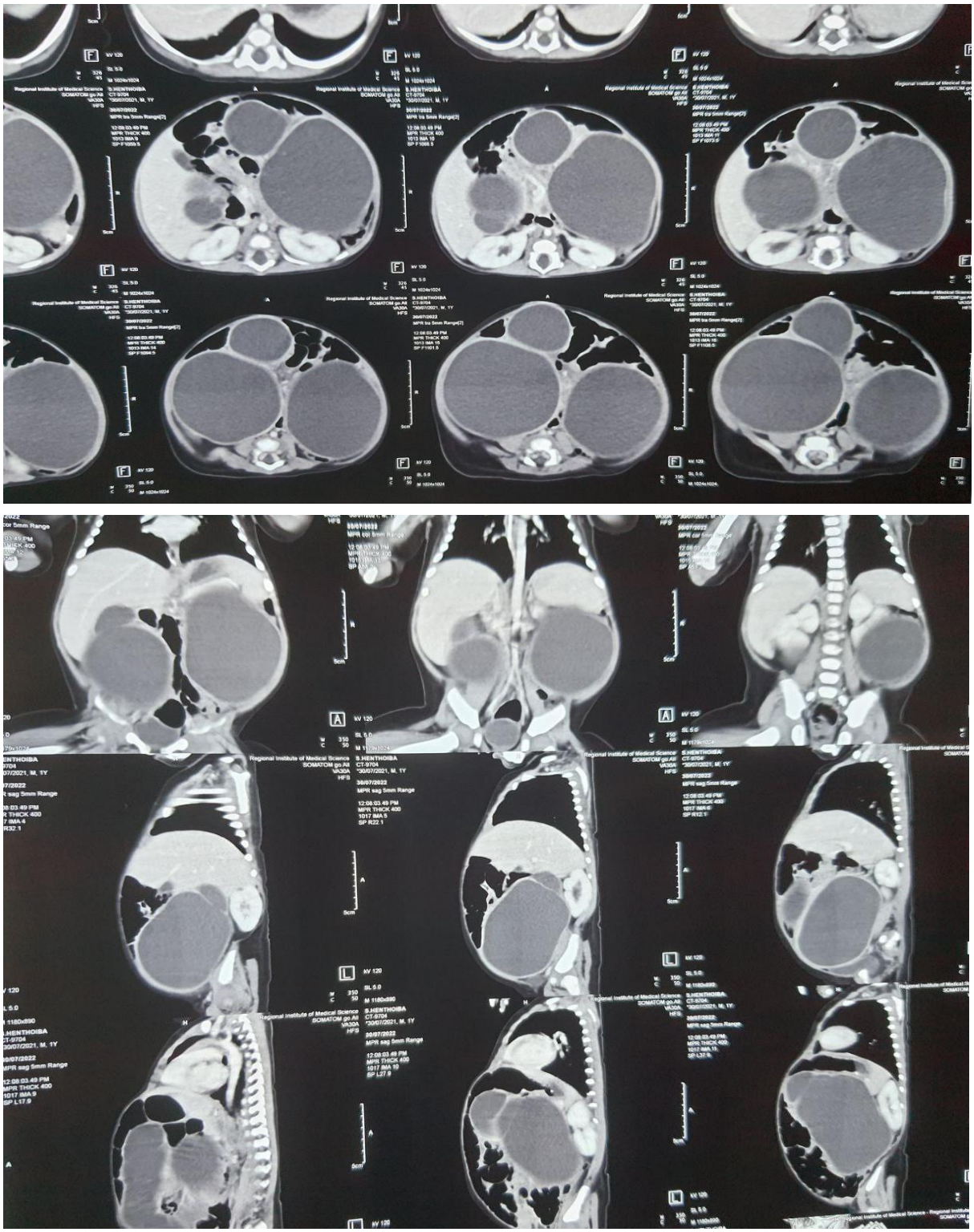
Case Report

A 2 months old male child presented to the Pediatric Emergency Department of Regional Institute of Medical Sciences Hospital, Imphal, Manipur with history of gradual abdominal distension and vomiting for the past 14 days, as narrated by a reliable informant, his mother. Vomiting occurred approximately 10-15 minutes after feed, with breast milk as the content. The patient had a birth weight of 2.8 kg after institutional term normal vaginal delivery, cried immediately after birth and breast feeding was initiated early. There was no significant history in the past.

Vital signs were normal at the time of examination. Abdomen was grossly distended with everted umbilicus and superficial veins were visible. All baseline blood investigations were with the normal range.

An ultrasonography of the abdomen was done, showing a large loculated fluid filled intra-abdominal cyst with no internal vascularity. Bowel loops were noted to be displaced, overall suspecting mesenteric cyst. CT scan had the findings of a large intra-abdominal multiloculated cystic lesion measuring 8 cm x 8 cm x 9 cm on the right side and 7.5 cm x 9 cm x 11 cm on the left side communicating with each other with contrast enhancement of the wall with no communication with the bowel wall, which was suggestive of mesenteric cyst.

Fig 1. CT whole abdomen

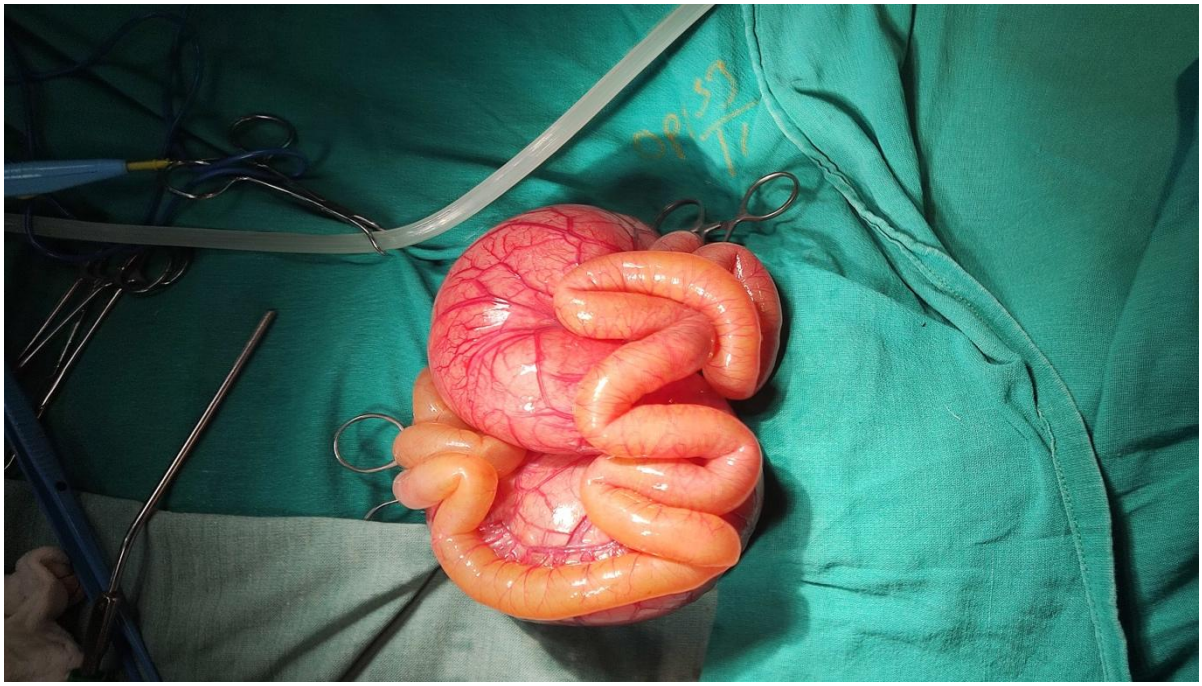


Patient was prepared for surgery after taking consent from the guardians. The abdominal cavity was entered through a right upper transverse abdominal incision which revealed a large bilobular cystic mass originating from the ileal mesentery, measuring 8 cm x 8 cm x 9 cm on the right side and 8 cm x 9 cm x 10 cm on the left side which contained around 600 mL of milky white fluid. The cyst was completely excised with no resection

Volume 6, Issue 2; March-April 2023; Page No 114-119

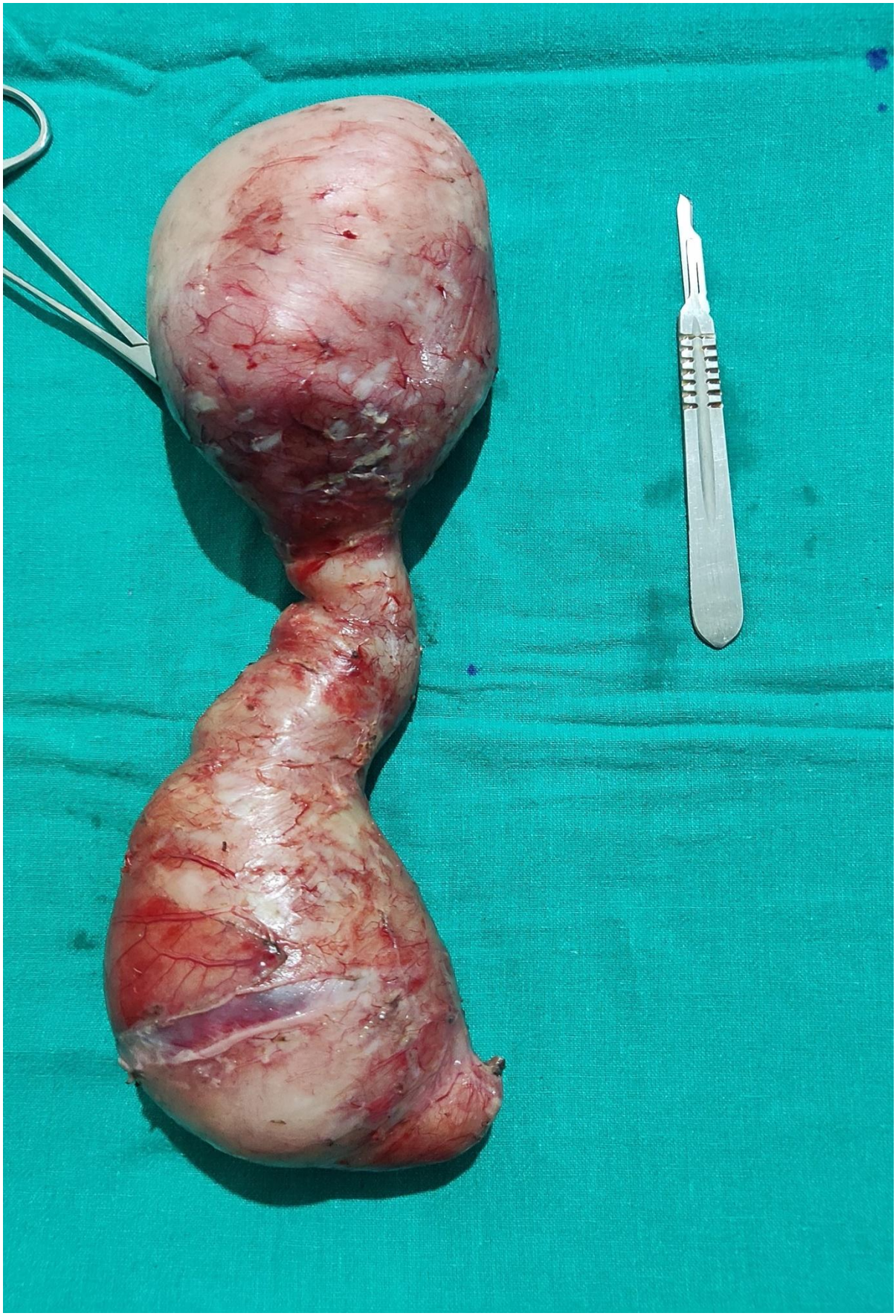
of the intestine required. The patient had an uneventful recovery and was discharged on the 7th post operative day. The histological report showed a wall lined by columnar epithelium.

Fig 2. Intraoperative view



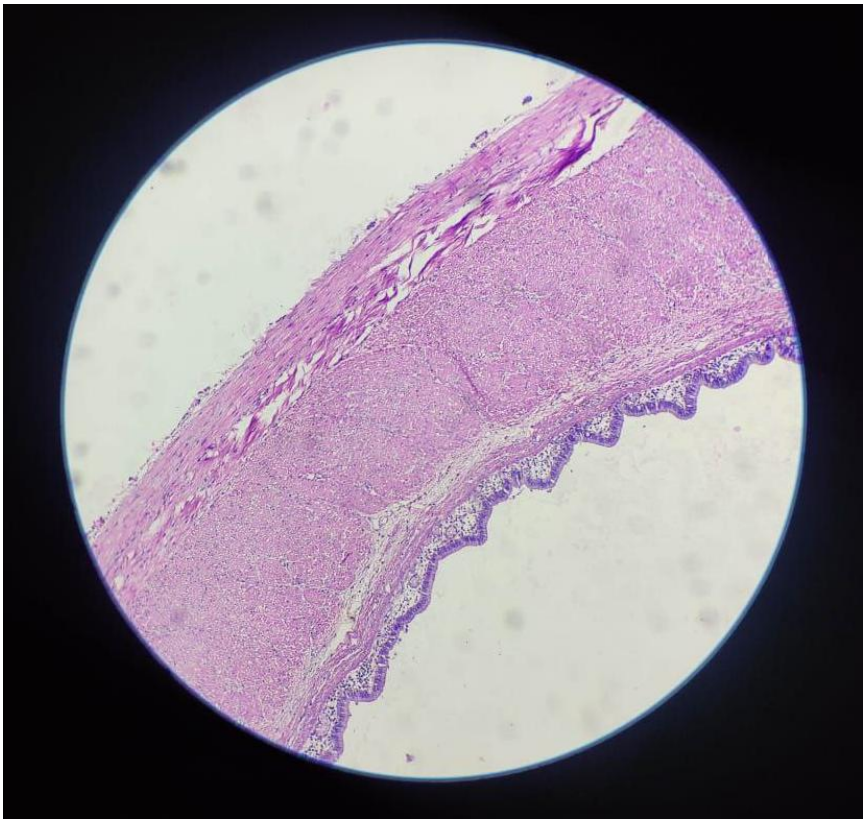
Volume 6, Issue 2; March-April 2023; Page No 114-119

Fig 3. Excised cyst



Volume 6, Issue 2; March-April 2023; Page No 114-119

Fig 4. Microscopic view of cyst wall



Discussion

Majority of the mesenteric cysts are congenital, but may be related to previous abdominal surgery, pelvic disease and trauma.[3,4] It affects males predominantly in the pediatric age group (males 62.5%, females 37.5%).[5] The most common site of origin is the small intestine mesentery (Small intestine 60%, large intestine 24% and retroperitoneum 14.5%).[6]

The most common presentation is non-specific abdominal pain (55-82%), followed by abdominal mass (54-61%) and abdominal distension (17-61%).[7,8,9]

Physical examination is often remarkable but reveals a mass in 66.8% of cases while the average duration of symptoms are 2-6 months.[10] It may even present as an acute abdomen due to torsion or rupture.[11]

Exact cause of mesenteric cyst is not clear. The most accepted theory, proposed by Gross, is benign proliferation of ectopic lymphatics in the mesentery that lacks communication with the remainder of the lymphatic system.[2]

For diagnosis, ultrasonography and CT scan of the abdomen tend to be the favored methods.[12] Ultrasonography shows a hypoechoic cystic mass and can show debris, septa etc. CT allows size determination and relation to nearby structures and depicts wall calcification.[6] MRI can also describe the relation between the mass and surrounding soft tissue.[13]

Treatment of choice for mesenteric cyst is surgery.[11] Marsupialization and aspiration are not done due to high rates of recurrence and infection rate.[14,15] Hence, procedure of choice for benign mesenteric cyst is complete enucleation.[9] Localized resection of intestine or surrounding structures may be required to excise the cyst en bloc.[16]

Complications associated with mesenteric cyst include volvulus, spillage of fluid, herniation of bowel into the abdominal defect and obstruction.[18]

Conclusion

Mesenteric cyst causes mostly non-specific symptoms and may even present as an acute abdomen. Preoperative diagnosis with the use of

Volume 6, Issue 2; March-April 2023; Page No 114-119

imaging is possible. En bloc excision is the treatment of choice, which was possible in the present clinical experience, hence avoiding any recurrence in the future and allowing a proper and complete histopathological examination.

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Volume 6, Issue 2; March-April 2023; Page No 114-119