

## CHYLOLYMPHATIC MESENTERIC CYST MIMICKING OVARIAN CYST – A RARE CASE REPORT

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### ABSTRACT

A 13-year-old premenarchial girl evaluated for abdominal pain was found to have a huge abdominopelvic cyst by ultrasound and CT Scan. She was managed successfully by laparotomy and excision of the non-ovarian huge cyst in toto, which was found to be a chylolymphatic mesenteric cyst. Chylolymphatic mesenteric cyst is a rare entity with variable clinical presentations and possible surgical implications in paediatric age group. Ultrasonography and CT scan suggest the diagnosis; however, histopathology is often required for confirmation. Complete excision of the cyst yields excellent results.

### KEYWORDS

Mesenteric Cyst, Chylolymphatic Cyst, Ovarian cyst.

**HOW TO CITE THIS ARTICLE:** Chandran S, Subramaniam CK, Balamurugan BL, et al. Chylolymphatic mesenteric cyst mimicking ovarian cyst – a rare case report. J. Evid. Based Med. Healthc. 2016; 3(25), 1174-1176.

DOI: 10.18410/jebmh/2016/269

**INTRODUCTION:** Mesenteric cysts are rare intra-abdominal tumours. Mesenteric cysts are found at the rate of 1 in 1,40,000 in the normal population while one third of the patients are children younger than 15 years. Documented data indicates an incidence of 1 in 35,000 paediatric hospital admissions. Mesenteric cysts may occur in any part of the mesentery from the duodenum to the rectum. Most frequently, the cysts are localised in small bowel mesentery (ileum is 60%) and mesocolon (ascending colon in 40%). Mesenteric cysts have multiple aetiologies. These mesenteric cysts mostly are found to be caused by congenital lymphatic pockets that gradually enlarge as they fill with lymph. Chylous variants of mesenteric cysts in paediatric population is rare. Here we describe a case of chylous mesenteric cyst in a 13-year-old girl presenting with abdominal distension and abdominal pain.

**CASE REPORT:** A 13-year-old premenarchial girl who was apparently healthy and immunised up to date presented to our Gynaecology Outpatient Department with complaints of abdominal distension for the past one year and abdominal pain for the past four days. The abdominal distension was misinterpreted as obesity by the patient and medical help was not sought. But for the past four days she had abdominal pain which was colicky in nature and was not relieved by antacids or analgesics. Her bowel and bladder habits were normal. There is no history of tuberculosis. On examination, her general condition was fair, no lymphadenopathy. Abdominal examination revealed a huge, smooth, nontender, mobile abdominopelvic mass of size

15cm × 15cm occupying the suprapubic region, extending up to the umbilicus. No hepatosplenomegaly was observed.

**Ultrasonography:** Revealed an abdominopelvic complex cystic lesion noted of size about 20-25 cm with multiple thin septations and internal echoes. Uterus was normal. Both ovaries could not be visualized separately.

**Impression:** Ovarian cyst with moderate left hydroureteronephrosis.

**CT Abdomen Plain:** Revealed a multiloculated huge abdominopelvic lesion with fluid attenuation value with septations noted, which extends from lesser sac, anterior pararenal space to left iliac fossa and the lesion compresses left ureter causing left hydroureteronephrosis. Uterus was found to be of normal size. Right ovary was normal. No evidence of lymphadenopathy.

**Impression:** Possibility of serous cystadenoma of left ovary.

The patient was evaluated for malignant ovarian cyst. The tumour markers (alpha-fetoprotein and βHCG) were in normal range for her age group. No signs of poor nutritional status or anaemia was found. She was found to be euthyroid. Since the tumour markers were normal, the case was discussed with paediatric surgeon. After all evaluations, with the assistance of paediatric surgeon, laparotomy was done revealing a fluid-filled cyst arising from the mesocolon occupying the entire abdominal cavity displacing the rectum to the right, superiorly extending up to the left renal hilum and inferiorly into the pelvis behind the uterus. Uterus and both ovaries were normal. The cyst was dissected out and excised in toto. (Figure 1.1 To 1.4). No postoperative complications occurred and patient was discharged on the 8<sup>th</sup> postoperative day.

Submission 09-03-2016, Peer Review 23-03-2016,

Acceptance 31-03-2016, Published 28-03-2016.

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DOI: 10.18410/jebmh/2016/269

Histopathological examination: Cyst wall is lined by endothelium containing lymphoid aggregates and foamy macrophages suggestive of chylolymphatic mesenteric cyst. Followup: Patient is comfortable without any recurrence and not attained menarche.

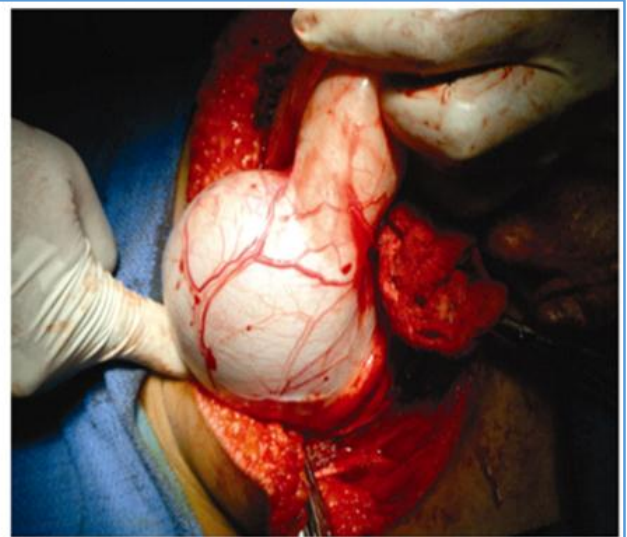
**DISCUSSION:** Chylolymphatic cysts are very rare variants of mesenteric cysts. These cysts arise in sequestered lymphatic channels or ectopic lymphatic tissue in the small bowel mesentery and enlarge by accumulating both lymph and chyle. The accumulation of chyle and lymph is thought to result from an imbalance between the inflow and outflow of fluid across these channels. Small bowel mesentery (50%-67%) especially the ileum was the most common site of mesenteric cyst formation.<sup>1,2</sup> Mesenteric cysts are usually thin walled and do not have any mucosa or muscular wall. The lining epithelium is composed of endothelial cells. They may be multi or unilocular. The cysts may be asymptomatic or may manifest with abdominal pain, distension, lump, or intestinal obstruction.<sup>3,1</sup> Mesenteric cysts may present with acute abdomen. Complications are torsion, infarction, infection, intestinal volvulus, intestinal obstruction and anaemia from intracystic haemorrhage in large cysts.

The definite diagnosis of chylolymphatic mesenteric cyst is difficult prior to surgical exploration as there are no pathognomonic symptoms or characteristic imaging findings. Abdominal radiographs are usually non-contributory; however, may reveal dilated bowel loops with air-fluid levels in patients with intestinal obstruction due to compression of the adjacent bowel by the cyst or by mesenteric volvulus. The diagnosis may be suggested by an ultrasound of abdomen, which may reveal a cystic lesion in relation to bowel loops. A fluid-fluid level has been reported as a characteristic finding of these cysts which results from an upper fluid level due to chyle and a lower fluid level due to heavier lymph. CT scan demonstrates fluid attenuation of the lesion and its relationship with adjacent viscera. A characteristic chyle-lymph fluid level has also been described. Although ultrasound and CT scan were able to detect a cystic lesion, a definitive preoperative diagnosis of chylolymphatic cyst could not be made. Management of chylolymphatic mesenteric cysts involves their removal which may or may not involve resection of the adjacent bowel. Most cysts can be enucleated, sometimes not possible without sacrifice of blood supply to adjacent bowel and resection.<sup>4,5</sup> Procedures like marsupialisation and drainage are associated with high recurrence rates and are best avoided. Complete excision with or without resection of the involved bowel was found to have excellent long term prognosis and no recurrence has been reported because of complete excision of ectopic lymphatic channels.<sup>1,6</sup> Histopathology of the resected specimen reveals either unilocular or multilocular cysts. The cysts are usually lined with single layer of endothelium and may contain lymphoid tissue and foam cells.

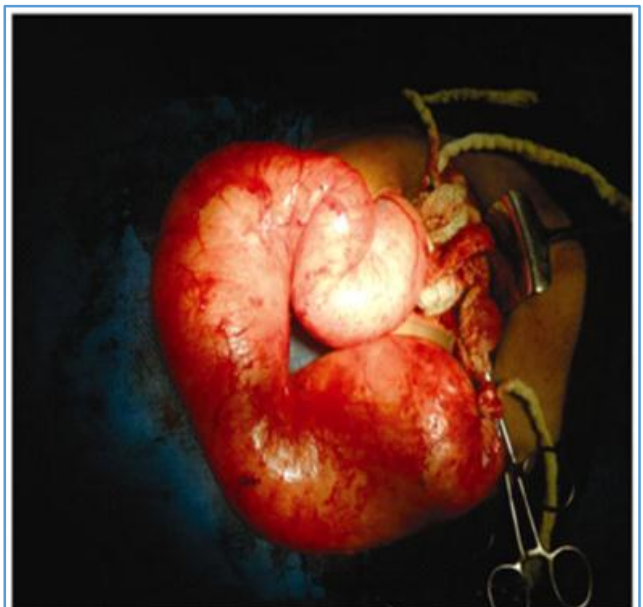
**CONCLUSION:** Although chylolymphatic mesenteric cyst is a rare entity in paediatric age group, its presentation in this

case mimicking an ovarian cyst is to be emphasised. After excluding malignancies with further imaging like CT, MRI and tumour markers, complete enucleation of the cyst seems to be diagnostic and curative and ensures excellent prognosis. Chylolymphatic mesenteric cyst should always be kept in mind as a differential diagnosis to ovarian cyst. A multidisciplinary approach with paediatric surgeon ensures appropriate management.

**ACKNOWLEDGEMENTS:** We thank the professors of Paediatric Department for their immense help in management of this interesting rare case.



**Fig 1.1: Intraoperative:  
Chylo Lymphatic Mesenteric cyst arising from mesocolon**



**Fig 1.2: Intraoperative:  
Chylo Lymphatic Mesenteric cyst during excision**



Fig 1.3:Resected Specimen



Fig 1.4:Resected Specimen

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