



Case Report

Mesenteric Cystic Lymphangioma in Mesentery among children: A Case Report in Zawia, Libya

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Received:02-08-2026-Accepted: 29-09-2026 -Published: 11-10-2026

Abstract:

Background: Mesenteric cystic lymphangiomas (MCLs) are rare intra-abdominal lesions, with an estimated frequency of one case per 100,000 to 1 per 250,000 hospital admissions. Clinical manifestations range from severe stomach discomfort to asymptomatic masses. Although the cause of these cysts is still unknown, there are a number of theories explain their pathogenesis. Currently, total surgical removal of the cyst is the mainstay of treatment for these rare lesions. **Case presentation:** We report a case of A 10-year-old boy presented to surgical department of clinic on March 15,2026, with a history of dull, intermittent colic abdominal pain for months associated with distended abdomen. An abdominal ultrasound (US) revealed a large, well-defined cystic mass in the right side of the abdomen. Subsequent Abdominal computed tomography (CT) scan with contrast done on the same day and revealed an intra-abdominal large well defined cystic mass in right aspect of abdomen The patient underwent an exploratory laparotomy, which revealed a retroperitoneal tumor on the right side were connected to mesenteric lymph nodes of the right mesocolon. The cystic mass was completely excised without need for bowel resection. confirming the diagnosis of a benign mesenteric cystic lymphangioma her specimen by histopathology examination. Conclusion: complete surgical excision Of cyst provides a definitive diagnosis and excellent clinical out come with out requiring bowel resection.

Keywords: Mesenteric: cystic lymphangiomas: Mesentery among children: Libya

Introduction: Mesenteric cystic lymphangiomas (MCLs) with a frequency of one case per 100,000 and 1 per 250,000 hospital admissions, uncommon benign congenital anomalies of the lymphatic [1,2] . Although MCLs affects the pediatric population- within first two years of life , MCLs are more common in boys (5:2 ratio) [1,2] . Clinical manifestations range from severe stomach discomfort to asymptomatic masses. They are either accidentally found during an abdominal radiological examination for other reasons or during a laparotomy to treat one of the complications due to these cystic tumors have a broad range of potential presentations, from asymptomatic to acute abdomen. Although the cause of these cysts is still unknown, there are a number of theories about how they form. Currently, total surgical removal of the cyst is the mainstay of treatment for these rare lesions. Correct pre-operative diagnosis is challenging because of this entity's rarity and absence of distinct symptoms [9]. Understanding these lesions is crucial since poor surgical care can lead to a number of problems [2,3]. Here in we report a case of a 10-year-old boy presenting with a large retroperitoneal MCL closely adherent to the right mesocolon. This report highlights the clinical presentation, diagnostic image pathway, and successful complete surgical.

Excision without need for bowel resection.

Case report

Patient history:

Patient presentation and examination: A 10-year-old boy presented to surgical department of JamaAtab clinic on March15,2026 with a history of dull, intermittent colic abdominal pain for months associated with distended abdomen, otherwise healthy. The child's parent saw a growing mass on the child's right side of the abdomen. On Clinical examination revealed no pallor, icterus, pedal edema, or lymphadenopathy, and all vital signs were within normal range. On physical examination, the abdomen was distended, and well defined a palpable mass was noted in the right upper quadrant. I have the child's guardian's consent to publish the case.

laboratory investigations: including a complete blood count and, renal function tests, and liver function tests were within normal limits. **Imaging:** An abdominal ultrasound (US) revealed a large, well-defined, cystic mass. Subsequent Abdominal computed tomography (CT) scan with contrast [figure 1], done on the same day and revealed an intra-abdominal large well defined cystic mass in right aspect of abdomen (mostly mesenteric in origin) in anterior pararenal space. It measures 12x10x12 cm, with very fine separation in proximal part and



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marked consecutive compression on inferior vena cava with relative bowel loops displacement. Magnetic resonance imaging (MRI) of abdomen and pelvis performed before and after intravenous contrast was done on March 16, 2026 detected large right peritoneal

multiloculated cystic lesion (145x96mm) occupying the right aspect of the peritoneal cavity, consistent with lymphangioma. Mild extrinsic compression of the right ureter without invasion. Medial displacement of inferior vena cava without vascular encasement.

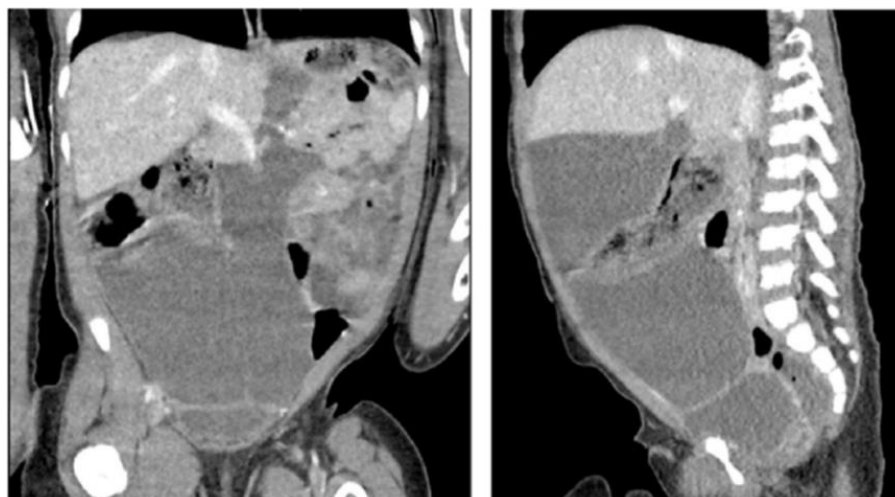


Figure 1: Abdominal/Pelvic computed tomography (CT) scan with contrast

Operative management: the patient scheduled for surgical intervention and underwent an exploratory laparotomy. Intraoperatively, the tumor was located in the right side retroperitoneally were connected to mesenteric lymph nodes of the right mesocolon, which

revealed a giant, soft, cystic, serous fluid-filled mass posteriorly to right meson colon and attached to mesenteric lymph nodes until root of superiorly mesenteric artery. The cystic mass was completely excised without need for bowel resection [figure 2].



Figure 2: post operative complete excision Mesenteric cystic lymphangiomas

Pathology: Histopathology evaluation reveals: Cystic mass measured from 13.5x8.5x5 cm greyish to light brown in colour and oval shape with soft in consistence. The mass open and showed unilocular cavity filled with yellowish serous to gelatinous material having smooth inner surface with well thickness .07cm and small cystic space filled with fluid. on immunochemistry stain show

well circumscribed cystic lesion with focal endothelial lining and stroma composed of meshwork of collagen and fibrous tissue focal aggregated lymphoid tissue, variable size dilated cystic space lined by flattened endothelium filled with pale pink proteins material with fascicles of smooth muscles, one reactive lymph node



seen. Therefore, confirming the diagnosis of a benign mesenteric cystic lymphangioma.

Postoperative course and follow-up: he was discharged home on post-operative day 4, at which time he was tolerating oral a regular diet. Outpatient ultrasound performed at six weeks after surgery showed no evidence of recurrence. The patient advised for follow up after seven months for re-evolution and examination.

Discussion:

Although lymphangiomas are fairly common non-cancerous tumors in children, their occurrence in the mesentery (the tissue connecting the intestines to the abdominal wall) is exceedingly uncommon. This case offers several key clinical learning points when compared with the existing literature.

Age presentation and clinical features: They are strongly associated with early childhood; 60% to 65% are evident at birth, and 90% are identified by an average age of 2 years. While patients of all ages are affected by mesenteric cystic lymphangioma (MCL), approximately 33% of cases are found in children under the age of 15 with the exact cause remains unknown, but a congenital origin is ideal since 65% of these tumors appear at birth and 60% are identified before the age of 5 [1,7]. our patient presented at 10 years of age, which represented a less common age group as similar to previously reported pediatric cases, symptoms were stable and non specific presenting primary intermittent colic abdominal pain for months associated with distended abdomen.

Location and Imaging Characteristics: Approximately 50% of Cystic lymphangiomas are usually located in the head and neck, while fewer than 1% of tumors occur in the mesentery, omentum, or retroperitoneal area [4,9]. In the peritoneal cavity, 70% of MCL originates from the mesentery of the small intestine, with 50–60% being ileal [1,4]. 24% Mesentery of the large intestine. 14.5% Retroperitoneal space (the area located behind the abdomen). 1.5% Unspecified [7].

It is suspected that lymphatics ending without suitable connections to the venous system grow and expand, resulting in the MCL [2]. Additional suggested causes encompass bleeding and inflammation causing proliferation, trauma, tumors, lymph node degeneration, radiation exposure, and surgical interference with lymphatic drainage or secondary lymphatic obstruction [3]. Typically, cystic lymphangioma in the abdomen must be distinguished from enteric cysts and intestinal issues. duplication, mesothelioma, dermoid cyst, and mucinous cyst [8]. The usual cystic lymphangioma appears as a low echogenic region on ultrasound imaging. It is depicted as an area of low to moderate intensity. on T1-weighted MRI, and appearing as a high-signal zone on T2-weighted MRI. MCLs differ greatly in their structure—they may be simple or complex, unilocular or multilocular, and can hold serous, chylous,

hemorrhagic, or infected fluids. Their dimensions vary from several millimeters to enormous sizes that can clinically resemble tubercular ascites [7,9]. In the end, although imaging characteristics may strongly indicate an MCL, a conclusive diagnosis requires histopathological verification that shows an endothelial lining associated with smooth muscle fibers and connective tissue [8]. When people do have symptoms from chylous cysts, they often say they have pain in their abdomen or that their abdomen is swollen. They might also feel sick to their stomach throw up have diarrhea or have trouble going to the bathroom. About half of the people with chylous cysts have fluid building up in their abdomen. Grownups with chylous cysts usually have symptoms that come on slowly over time [3]. Kids with mesenteric chylous cysts often get sick really fast. This is because mesenteric chylous cysts can cause problems, like the cyst breaking open bleeding inside the abdomen the intestine getting twisted the cyst dying or the intestine getting blocked. These problems can be very serious. Need to be treated right away. Mesenteric chylous cysts are a deal because they can cause a lot of problems if they are not treated [3,8].

Surgical management:

Surgery is the treatment for patients with MCL. The goal is to remove the tumor with clear margins. This may require removing part of the bowel [4,6]. However it may not be possible if the tumor is in a location or has grown into important structures. If complete removal is done there is a 0 to 27 percent chance that MCL will come back. Sometimes only part of the tumor can be removed. This is called resection or marsupialization, this approach can lead to serious problems like bleeding, infection and fistula, also MCL can come back in 10 to 100 percent of cases. Another option is to drain the tumor, this often results in MCL coming back and can cause a hole, in the intestine [3,9]. Our case highlights the feasibility of careful blunt and sharp dissection to completely excise the peritoneal mass while preserving bowel integrity and vascular supply.

Conclusion:

MCL should be considered in the differential diagnosis of pediatric intra-abdominal or retroperitoneal cystic masses. Ultrasound and contrast CT are essential diagnostic tools to accurate localization and surgical planning. The primary treatment is a complete resection, which has a low rate of recurrence and an uncomplicated post-operative recovery. A combined laparoscopic and open surgical technique may provide benefits in certain situations by allowing accurate tumor identification and removal, and can be regarded as a feasible choice in complicated abdominal surgeries.

Conflict of Interest and Funding: The author declares no conflict of interest and received no specific funding for this work

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