A CASE REPORT ON EARLY PRESENTATION OF CHYLOLYMPHATIC CYST

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ABSTRACT

Cysts of the mesentery are among surgical rarities and of varied aetiology with variable presentations and this has surgical implications in the pediatric age group. They may be derived from the gastrointestinal tract, the genitourinary system, previous inflammation (pseudocysts) or malignant cystic tumours, but the commonest cause is generally considered to be a congenital lymphatic cyst. The clinical presentation is not characteristic and in addition, the preoperative imaging although suggestive is not diagnostic. In most cases, the diagnosis is confirmed after surgical exploration and removal of the cyst. A case report of a baby aged 6 months is being reported. Hope that this information will reinforce the diagnostic and treatment strategy.

KEYWORDS

Messenteric Cyst, Chylolymphatic Cyst, Early Presentation

1. INTRODUCTION

A chylolymphatic cyst is a rare variant of a mesenteric cyst [1,2]. The mean age of children affected is 4.9 years. These cysts present within the mesentery, lined with a thin endothelium or mesothelium and filled with chylous and lymphatic fluid [3]. Although mesenteric cysts in general have been reported in the literature fairly frequently, chylolymphatic cysts in the pediatric age group are extremely rare in the modern medical literature [2], therefore very little information is available regarding their presentation and complications.

2. CASE REPORT

A 6 month old male child, with a full term normal hospital delivery, presented with complains of excessive crying, diarrhoea mixed with blood and mucus and abdominal pain. The pain was intermittent, colicky, poorly localized and was mild to moderate in intensity. On clinical

examination, there was no palpable abdominal mass. Plain abdominal radiography was normal. On ultrasonography of abdomen, multiple echofree cystic areas were noted in the midline in infraumbilical region of sizes 1.3*1.6 cm and 1.5*1.3 cm. Abdominal computed tomography was done which showed well defined small hypodense cystic lesions noted in infraumbilical region intraperitoneally in right paramedian location, just beneath the rectus abdominis muscle. The hypodense lesions measured 8*9 mm and 7*7 mm respectively. Our patient underwent diagnostic laparoscopy which showed a single chylous looking mesenteric cyst adherent to jejunum. The operation was converted to a laparotomy. There was a single cyst of size approximately 7 cm in diameter. There was stretching of the bowel loop over the cyst. Resection of the involved gut along with the cyst was required in the patient as the involved gut shared the vascular supply with the cyst. Postoperative period was uneventful and the patient recovered well. The specimen was sent for histopathological examination, which revealed multiloculated cysts lined with endothelium and filled with chylous fluid and lymph. Thus, the case was confirmed to be chylolymphatic cyst by histopathology.

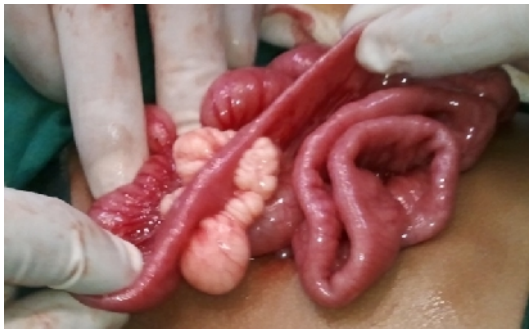

Figure 1. Bowel showing cyst attached to the bowel wall on either sides.

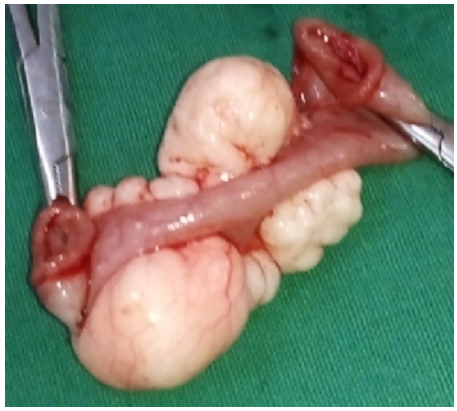

Figure 2. Adjacent bowel resected.

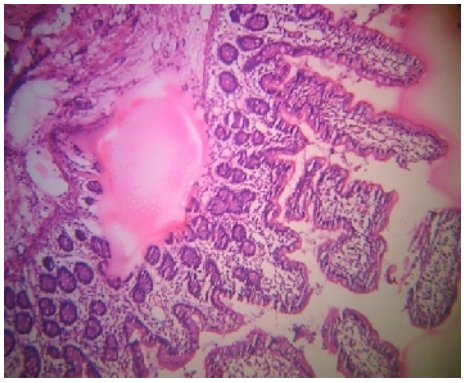

Figure 3. Histopathogolical confirmation – chylolymphatic cyst

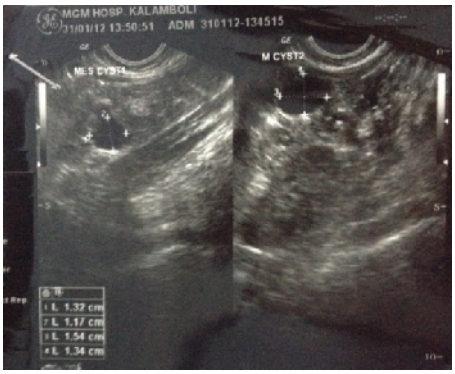

Figure 4. USG shwing the messenteric cyst

3. DISCUSSION

Chylous cysts are rare variants of mesenteric lesions and constitute 7.3% to 9.5% of all abdominal cysts [1]. There are very few cases of pediatric chylolymphatic cysts reported in the literature. Beahrs *et al*. [4] classified mesenteric cysts into four groups based on etiology: embryonic or developmental; traumatic or acquired; neoplastic; and infective or degenerative. Recently, a pathologic classification system has been proposed [5]. Types 1 (pedicled) and 2 (sessile) are limited to the mesentery and can be excised completely with or without resection of the involved gut. Types 3 and 4 (multicentric) extend into the retroperitoneum and require complex operations and often sclerotherapy as well. Based on the contents of the cyst, the mesenteric cyst can be divided into serous, chylous, hemorrhagic and chylolymphatic cyst. The chylolymphatic cyst, as indicated by its name, contains both chyle and lymph. The accumulation of chyle and lymph is considered to be the result of an imbalance between the inflow and outflow of fluid [1]. This cyst may be asymptomatic, and may cause abdominal distension or an abdominal lump or may present with complications such as intestinal obstruction, hemorrhage, infection, rupture of the cyst, volvulus or obstruction of the urinary or biliary tract. Radiological investigations form an integral part of the management of these lesions. A plain abdominal radiograph may show a gasless, homogenous mass defect displacing the bowel loops around it. In a child with an obstructed intestine, multiple air-fluid levels will be seen on an erect abdominal radiograph. Barium studies are now only of historical interest; abdominal ultrasonography is currently the imaging procedure of choice. This delineates the nature of the mass, organ or site of the origin, and the extent and associated mass effects on the kidney or liver, if any. In a

chylolymphatic cyst, a 'fluid-fluid level' can be seen on ultrasonography due to formation of an upper fluid level by lighter chyle over a lower fluid level of heavier lymph [6]. Computed tomography adds little additional information; however, contrast-enhanced film can show the relationship of the bowel and other vital structures to the lesion. Some authors have described the characteristic appearance of a chylolymphatic cyst on computed tomography in the form of the presence of fluid levels of differing echodensities, that is to say, an upper fatty echodensity of chyle on top of the water echodensity of lymph in a well-defined cystic lesion [6,7].

Antenatal detection of cystic abdominal lesions is possible in a fetus during antenatal ultrasound scanning. The sonologic picture may help in differentiating the lesion from many other differential diagnoses. As this usually does not alter the obstetrical management, a definite diagnosis is usually made in the postnatal period [8].

The different surgical approaches used are marsupialization, sclerotherapy, drainage, enucleation, percutaneous aspiration, and excision of the cyst with or without resection of the involved gut [9-12]. Due to high recurrence rates associated with marsupialization and drainage, complete excision of the cyst should be attempted whenever possible [10]. In adults, the cyst can often be enucleated or 'shelled out' from between the leaves of the mesentery; in children, however, bowel resection is frequently required [10,13,14]. The medical literature mentions instances where laparoscopic removal of mesenteric cysts has been tried successfully [15].

Intra-operatively, similar findings can be seen in cystic lymphangioma, retroperitoneal cystic teratoma, caseating tubercular lymph nodes, and hydatid cysts. Even lymphoma and duplication cysts may also give similar appearances. Excision biopsy is then recommended to differentiate these cases. Histopathology is confirmatory and differentiates chylolymphatic cysts from all these lesions. Cystic lymphangioma has a striking resemblance to chylolymphatic mesenteric cysts both grossly and microscopically. Some authors consider chylolymphatic mesenteric cysts to be a type of cystic lymphangioma, but the medical literature also shows some authors describing chylolymphatic cysts as a variant of mesenteric cysts [3,5,13,16]. The absence of smooth muscle and lymphatic spaces in the wall of the cyst differentiates mesenteric cysts from cystic lymphangioma [3].

4. REFERENCES

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