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Case Report
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Mesenteric Cystic Lymphangioma in an 11-Month Infant: A Case Report

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Abstract

A mesenteric cyst is a cystic lesion located in the mesentery. Abdominal cystic lymphangiomas may present in various ways, ranging from an asymptomatic mass to an acute abdomen presentation. We presented a case of an 11-month-old baby boy who was admitted with diffuse abdominal distention. Computerized Tomography (CT) revealed a huge right abdominal complex cystic mass. At laparotomy, we found a giant infected mesenteric cyst in the distal ileum. Pathological examination confirmed a diagnosis of mesenteric cystic lymphangioma containing chylous milky fluid.

Keywords: Lymphangioma; Mesenteric Cyst; Pediatrics; Abdominal Cyst

Introduction

A mesenteric cyst is a cystic lesion located in the mesentery. Mesentery is a fold of membrane running from the duodenum to the rectum [1]. Cystic lymphangiomas are congenital benign malformations of the lymphatic system. They are rare, but can occur in the abdominal and pancreas regions [2]. Cystic lymphangiomas cause around 1:20,000 admissions in pediatrics and are more common in boys (5:2) [3]. The first case was described in 1507 by Benevienae; nonetheless, the classification and pathology of cystic lymphangiomas remain a point of discussion [4]. Abdominal cystic lymphangiomas may present in various ways, ranging from an asymptomatic mass to an acute abdomen presentation.

Case Presentation

An 11-month-old boy presented with diffuse, gradually increasing abdominal distention. The issue, as well as severe abdominal pain, had been ongoing for the past 1.5 months. Physical examination revealed severe abdominal distention with a palpable tender mass at the umbilical area and hyperactive bowel sounds. Laboratory results showed anemia (HGB: 8.8 g/dL) and a high platelet count (523 10^3/µL). Plain abdominal radiographs showed a solid mass at the umbilical area and distended bowel loops, suggesting intestinal occlusion (Figure 1). Ultrasonography demonstrated a huge right-sided abdominal complex cystic lesion measuring 8 cm × 12 cm × 9 cm in size. The lesion had turbid contents, anterior thick walled and a thick incomplete septum (Figure 2). The lesion was displacing the bowel loops to the left side. Computed Tomography (CT) revealed a huge right abdominal complex cystic mass. We suspected a mesenteric cyst and planned a surgical intervention. At laparotomy, we found a huge infected mesenteric cyst (about 10 cm × 15 cm) in

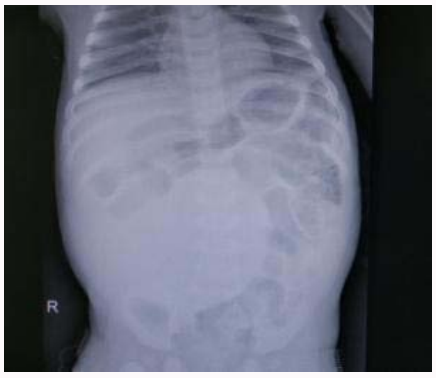

Figure 1: A plain abdominal X-ray showing a solid mass at umbilical area and distended bowel loops.

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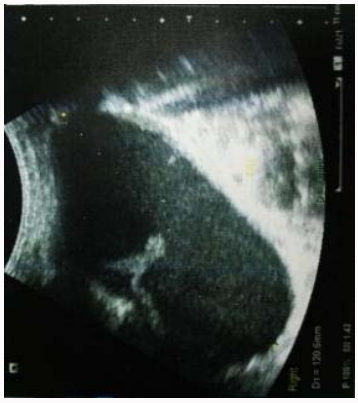

Figure 2: Ultrasonography demonstrated a huge right-sided abdominal complex cystic lesion.

the distal ileum. A pyogenic membrane covered the cyst in addition to the cecum and the appendix. Intestinal resection of the involved loops was necessary and end-to-end ileo-ileal anastomosis and appendectomy was performed. Pathological examination confirmed a diagnosis of mesenteric cystic lymphangioma containing chylous milky fluid and acute appendicitis. The patient was discharged at day 8 post-operation in a healthy condition for follow-up.

Discussion

Lymphangiomas are uncommon. They represent about 5% to 6% of all benign tumors in pediatrics. They typically involve the head and cervical region, but can also occur in the intestines, pancreas, and mesentery (10%) [5,6]. Mesenteric masses are especially rare, representing only 1:20,000 hospital admissions. As Kurtz reports, mesenteric masses are diagnosed in males more than in females (1.4:1) [7,8]. About 30% of cases have been in children less than 15 years of age with a mean age of 4 years [9]. Mesenteric lymphangioma is an abnormal embryonic development of the lymphatic system that most commonly occurs in the small intestine [10]. It represents about 1 in every 100,000 admissions in pediatric hospitals [11]. About 90% of cases are discovered at a mean age of 2 years old, with a male to female ratio of 3:1 [7,12]. It is associated with other congenital abnormalities and cystic lesions [13]. Histologically, mesenteric lymphangioma results in a thin wall that contains lymphatic tissues and spaces and smooth muscle; this wall is lined with endothelial cells and foam cells [14]. Patients may have different presentations according to mass location and size. Most patients present with a large mass along with abdominal distention or discomfort and acute abdominal symptoms due to rupture, obstruction, or infection. The most common differential diagnoses are an irreducible inguinal hernia; an intestinal duplication cyst; or ovarian, splenic, or renal cysts [1,6]. The first choice for diagnosis is ultrasound. Ultrasound can show the mass content, wall characteristics, and the septum. A CT scan can offer further detail about the mass. However, even ultrasound and CT scan together are not enough for a preoperative diagnosis. Magnetic Resonance Imaging (MRI) is the most useful tool for diagnosis and surgical planning. However, a definitive diagnosis is dependent on histopathology and immunochemistry [3,14]. In the present case, there was no medical treatment that we could offer the patient. Complete surgical excision, which is the most well-known solution, was therefore done for the patient [15]. Bowel resection and anastomosis is needed in more than 50% of cases of mesenteric lymphangioma. Follow up was required in order to detect any complications and in order to check for recurrence due to incomplete excision of the mass [4,15]. Recently, researchers have emphasized the role of laparoscopy; however, laparoscopy can increase the recurrence rate, which is 10% [3,16]. As 10% of patients have a spontaneous regression of the mass, some authors have also recommended conservative management even for asymptomatic patients [1]. Some authors have further recommended aspiration and injection of sclerosant agents for emergency decompression. Other new treatments include ok-432, bleomycin, and steroids, but these treatments have not shown good results compared with surgery [5]. Fortunately, mesenteric lymphangioma has a perfect prognosis.

In summary, mesenteric lymphangioma affects young children, who usually present with no characteristic signs or symptoms. It can be effectively diagnosed by ultrasound, CT scan, and MRI. To prevent recurrence, complete excision of the mass is necessary.

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