Case report:

A Rare Case of Huge Intraabdominal Mesenteric Cyst in a Paediatric Patient Mimicking Volvulus.

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Abstract

Mesenteric cyst is a very rare disease in children that can present in many various conditions. Its diagnosis is very challenging either by a clinical or imaging. Delay in diagnosis can cause significant morbidity and mortality for the patient. Hence, we shared a case of a huge mesenteric cyst in paediatric that presented as an acute abdomen and causing preoperative diagnostic dilemma.

Keywords: Mesenteric, Cyst, Paediatrics, Volvulus

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Introduction

Mesenteric cyst is a rare intra-abdominal masses. It is reported to occur in 1 out of 20,000 peadiatrics (less than 10 year of age) admissions¹. Only total about 30% of the cases occur below 15 years old². In literatures, less than 1000 cases were reported³. This rarity of the disease make it difficult to diagnose either by clinical presentation or imaging. In this case, we reported a huge intra-abdominal mesenteric cyst mimicking a malrotation.

Case Report

A 4-year-old boy presented with one day history of colicky abdominal pain associated with non-projectile clear vomitus around 10 times and reduced oral intake. He was not feverish and able to pass flatus without bloody or mucoid diarrhea. He had similar episodes twice last year in May and August and well in between episodes. He was hospitalized in other hospital for 2 days for each episode. However, the investigation results from the previous hospitals were not available.

Clinically, patient was dehydrated and lethargic but not in sepsis or febrile. The abdomen was not distended, soft with active and normal bowel sound. There was no blood or malaenic stool upon digital rectal examination. Blood investigatons revealed slightly increase total white cell, 12.6 x 106/L with normal serum urea and electrolyte.

Plain radiograph showed no evidence of dilated bowel. Urgent ultrasound was requested to rule out intussusception or malrotation. However, the ultraound revealed no sonographic evidence of intussusception. Malrotation could not be excluded in view of poor assessment of the mesenteric vessel. An incidental findings of large cystic mass in left side of the abdomen was noted (figure 2). The patient was then subjected to an urgent computed tomography scan (figure 3), which showed swirled pool mesenteric sign, suggestive of malrotation with left cystic lesion possible mesenteric cyst or duplication cyst.

He underwent an urgent explaratory laparotomy. Intraoperatively, a huge mesenteric cyst about 9cmx7cmx4cm was noted at the ileum mesentery, causing a small bowel volvulus. The cyst was excised succesfully. He was well post operatively and was discharged 7 days later. Histopathological examination was compatible with duplication cyst.

Discussion

Mesenteric cyst is a benign cyst and mainly occur in paediatric age group. It is defined as any cyst located in the mesentery; it may or may not extend into the retroperitoneum, which has a recognizable lining of endothelium or mesothelium cell².

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Figure 1. Plain abdominal radiograph shows a well defined round opacity in the left hypochondriac region.



Figure 2.Ultrasound shows a well defined cystic lesion with internal echo.

The cause of this condition is still not clear. Gross's theory described a benign proliferation of ectopic lymphatics in the mesentery that lack of communication with the remainder of the lymphatic system⁴.

Mesenteric cyst can be classified by its histopathological feature as proposed by De Perrot et al. or by its types proposed by Beahr et al. According to Beahr et al., the four types of mesenteric cyst are: developmental, traumatic, infective and neoplastic. As in our case, we are not really sure the exact type. This was due to the fact that we were unable to retrieve the previous medical record during the patient's previous hospitalization.

Mesenteric cyst occurs more predominantly in boys as compared to girls and higher percentage



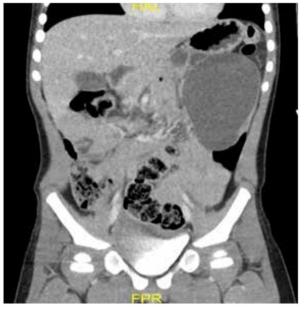


Figure 3. Contrast computed tomographyin axial view and sagital view, show a cystic lesion in left side of the upper abdomen. Noted whirl pool apperance of the mesenteric vessels.

occurs in age either less than 5 years old or 10 years old depending on the publications¹. As in our case, the patient is 4 years old and the patient is a boy, which is quite fit in the majority of reported incident.

The acute abdomen is the most common presentation of a patient with mesenteric cyst. It includes pain(82%), nausea and vomiting (45%), constipation(27%), diarrhea(6%)and clinically about 61% had a palpable abdominal cyst⁵. We had same presenting symptoms which were abdominal pain and vomiting but there was no palpable mass felt during per abdominal examination. In fact the normal bowel sound were present, thus making our clinical diagnosis challenging.

The role of imaging is very important in helping establishing the diagnosis hence, can dictate

further plan of management. According to Senocak et al.,ultrasonography(USG) is the most reliable modality in the expert hands and computed tomography scan is used to confirm the suspected cases⁶. The usage of contrast media during the computed tomography abdomen either via intravenous administration or per oral will further aid in differentiating the relation of the cyst with intestine, the location, nature and extention of the cyst⁷.

Mesenteric cyst can occur anywhere in the body. A study showed that 60% of the cyst occured in the small-bowel mesentery, 24% in the large-bowel mesentery and 14.5% in the retroperitoneum¹. 50-60% of the small-bowel origin occured in ileum mesentery⁸. In our case, the cyst was located at the ileum mesentery, causing small bowel volvulus. Hence, warranted emergency surgical intervention.

The treatment of choice for mesenteric cyst is complete excision without bowel resection as described in various literatures. However, if the surgeon is unable to do complete excision even with bowel resection, then there is an option of partial cyst excision with marsupilization of remaining cyst, which was reported in about 10% of the cases¹.

Conclusions

Mesenteric cyst is a very rare entity and its presentation can mimick other conditions. A delay in diagnosis and management can cause a significant morbidity and mortality to the patient. Hence, a high index of suspicion is needed in diagnosing this condition. Thus, preventing a significant morbidity and mortality.

Conflict of interest

No conflict of interest has been disclosed by the authors.

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