Case Report

Huge Pediatric Omental Cyst; A Condition Mimic Ascites

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Introduction

Omental cysts are rare abdominal lesions that are difficult to diagnose [1].

They are derived from the lymphatic tissue and thought to represent benign proliferation of ectopic lymphatic tissue that lack communication to normal lymphatic channels. Omental cysts may be simple or multiple, unilocular or multilocular, containing serous, lymphatic, hemorrhagic or infected fluid.

They might be presented in the greater or lesser omentum and are lined by endothelium. Omental cysts may occur in all age groups and discovered incidentally during imaging studies or during laparotomy for another conditions. Clinical presentation may be chronic in which there may be gradual abdominal distension or it may present in acute form in which there is acute pain, distension, fever, vomiting and peritonitis.

Case Presentation

A 6-year-old female presented with four days history of abdominal pain, decreased appetite, constipation and frequent non bilious vomiting. This acute condition was associated with long history of progressive abdominal distention since the third year of life (Figure 1), on examination the abdomen looks distended, soft, non-tender with evidence of huge ascites and positive transmitted thrill. Routine blood tests were normal. An abdominal ultrasound was performed and showed a large cystic lesion with internal septations occupying all the abdomen extending from epigastrium to pelvis. Erect abdominal x-ray show soft tissue shadow occupying most of the abdominal cavity with paucity of bowel gases (Figure 2).

The origin of the lesion could not be established. Differential diagnoses of huge omental cyst, big ovarian cyst, huge mesenteric cyst and cyst of other solid organs were evaluated. We advised for MRI to assess the exact origin of the lesion. MRI showed a giant intraperitoneal cystic mass with homogenous intensity characteristic of fluid, no solid components, no clear organ of origin and no organ invasion (Figure 3). A diagnosis of omental or mesenteric cyst was made.

Figure 1: Pre-operative lateral view of the abdomen.

Figure 2: KUB show soft tissue shadow.
Patient underwent laparotomy through right supramblica
cal incision which revealed a huge cystic mass with thin wall
originated from and attached to the greater omentum by a
pedicle (Figures 4 and 5). In order to deliver the cyst complete-
ly through a relatively small incision figure 4, we reduce the
size of the cyst by suctioning the serous fluid contained within
the cyst using a suction device (about 1700 cc), this followed
by complete excision of the cyst which was sent for histol-
pathological study which revealed thin walled cyst lining of
nonpleomorphic cells with abundant eosinophilic cytoplasm,
vesicular nuclei and small nucleoli picture consists with simple
cyst no dysplastic or malignant change was seen.

Abdominal ultrasound showed large cystic lesion with
thin wall and internal septations. Absent of fluid collection in
the dependant positions in the recto vesical, vaginovesical
pouch, and in the sub hepatic region in the Morrison’s pouch,
with absence of anterior floating of bowel loops excluded
ascites.

In order to leave the patient with a small abdominal
incision scar we decided to suck the fluid contain as a first step
in order to decrease the size of the cyst, the cyst then extracted
and, approximately 2 L of serous fluid was drained and the baby
left with small incision with a concave abdomen as shown in
figure 6. Complete excision of the omental cyst is now
considered as the preferred treatment of choice. It is rarely
necessary to resect the bowel, and recurrence is rare [7].
Cystectomy is usually indicated because of the possibility
of torsion, rupture, bleeding and infection [8]. Malignant
deterioration of omental cyst is rare. There are only few reports
of sarcoma and adenocarcinoma [9].

Discussion

Omental cysts were not described until the report of
Gairdner in 1852 [2]. The true etiology of omental cysts is
not well known yet. They are believed to arise from continued
proliferation of ectopic lymphatic vessels that have no apparent
communications with the normal lymphatic system [3].
Omental cysts occur in all age groups but most often in
children and young adults [4]. Although it is well known that
large or giant omental cysts can occur in the pediatric age
group, their presentation as ascites is rare and can be a source
of morbidity and diagnostic delay. In our baby the abdominal
examination revealed positive ‘transmitted thrill’ but the
shifting dullness’ was negative, Cattau El Jr et al., found the
absence of flank dullness to be the most accurate predictor
against the presence of ascites and the probability of ascites
without flank dullness was less than 10% [5]. Specific
radiological features that can differentiate large omental cysts
like that one in our patient from ascites were not evident,
including separation of bowel loops; absence of fluid from
locations in which free moving ascetic fluid usually collects,
such as the perihepatic spaces and culde-sac; and focal
septation [6].

Figure 3: MRI of huge cystic lesion.

Figure 4: Supra umbilical incision to the right.

Figure 5: Omental cyst completely delivered from the abdomen.
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Abdominal ultrasound showed large cystic lesion with thin wall and internal septations. Absent of fluid collection in the dependant positions in the recto vesical, vaginovescical pouch, and in the sub hepatic region in the Morrison's pouch, with absence of anterior floating of bowel loops excluded ascites.

In order to leave the patient with a small abdominal incision scar we decided to suck the fluid contain as a first step in order to decrease the size of the cyst, the cyst then extracted and, approximately 2 L of serous fluid was drained and the baby left with small incision with a concave abdomen as shown in figure 6. Complete excision of the omental cyst is now considered as the preferred treatment of choice. It is rarely necessary to resect the bowel, and recurrence is rare [7]. Cystectomy is usually indicated because of the possibility of torsion, rupture, bleeding and infection [8]. Malignant deterioration of omental cyst is rare. There are only few reports of sarcoma and adenocarcinoma [9].

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

References