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Omental Cyst Presenting as Acute Abdomen in Pediatric Patient: Case Report

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Abstract: ***Omental cysts are rare, predominantly occur in children, and often initially present with symptoms masquerading as other more common intra - abdominal pathologies. In this case report, we present the case of a child with an omental cyst that originated from the greater omentum***

Keywords: Omentum, cyst, pediatric

1. Introduction

Omental cysts are any cyst that is confined to the greater or lesser omentum, the most common site being the greater omentum. The incidence of mesenteric and omental cysts is closer to one in 20, 000 among children, and it is even lower in infants. So far, only about 150 cases have been reported, of which only 25% have been detected in children less than 10 years of age. !

Omental cysts have uncertain etiologies; lymphangioma being the most commonly incriminated etiology. They have varieties of presentations based on their number, location, size, and content. They can also present with features of an acute abdomen due to bleeding into the cysts, torsion, or rupture of the cysts.

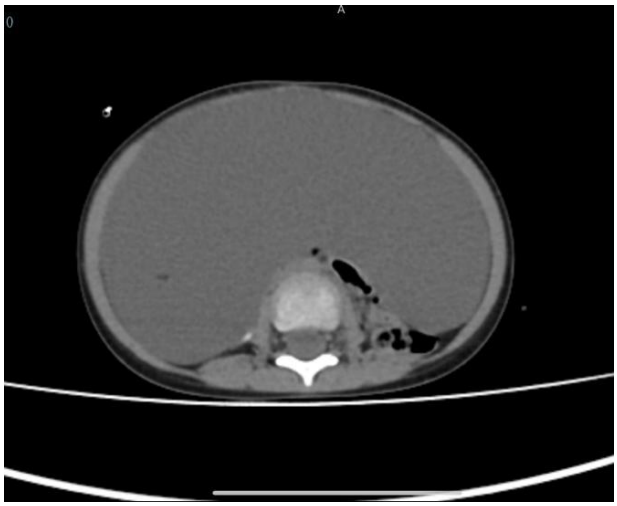
Because of these diverse clinical presentations, pre - operative diagnosis is challenging, especially in resource - limited settings. If done by an experienced radiologist, ultrasound can reliably be used to diagnose abdominal cysts, whereas computed tomography (CT) scans and magnetic resonance imaging (MRI) provide more details about the extension and interior properties of these lesions.

Since there is no medical therapy available, the only option of treatment is surgical removal; Given the rarity of large omental cysts, we hereby report a case of a large omental cyst presenting as an acute abdomen in a 3 year old child.

2. Case Details

A 3 year old female child presented to our hospital with abdominal pain of 8 days duration, which was initially around the periumbilical area and later involved the whole abdomen. she had associated high fever, nausea, and vomiting of the same duration. On physical examination, she was in pain and she was tachycardic (PR=124beats/minute), (RR=24breaths/minute), and febrile (temperature=39.2°C). All the anthropometric indices were in the normal range. she had a hypoactive bowel sounds, and diffuse tenderness all over the abdomen. Investigations revealed leukocytosis (WBC=20, 080/ML) and Other cell lines were normal (RBC - 4.1 x10%L, Hemoglobin=11.1g/dL, Platelet 234, 000/ML).

On Radiological examination Cect (a+p) suggestive of Large, welldefined non enhancing peritoneal cystic lesion measuring 10.2 x 15.7 × 16.7 (AP × ML × SI) cm occupying entire abdominal cavity is seen extending from epigastric region to pelvis with Mass effect is seen on adjacent bowels and vessels most likely s/o mesenteric cyst/omental cyst



Patient then posted for laparoscopic resection of cyst which revealed a large omental cyst with serous content measuring around 15 cmX20 cm, contains approximately 1litre serous fluid arising from the greater omentum (Figures 1 and 2); there was only minimal reactive fluid in the general peritoneum. The cyst was carefully removed and the child had smooth post - operative days until her discharge on the third day.

Figure 1

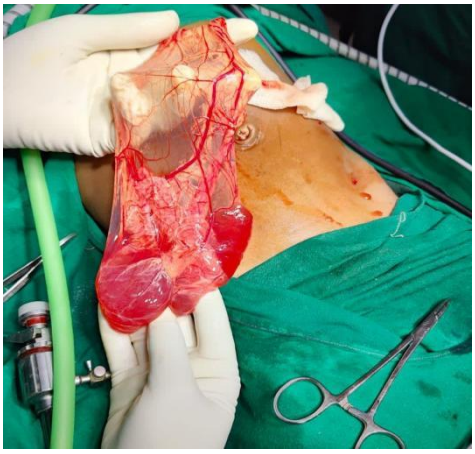
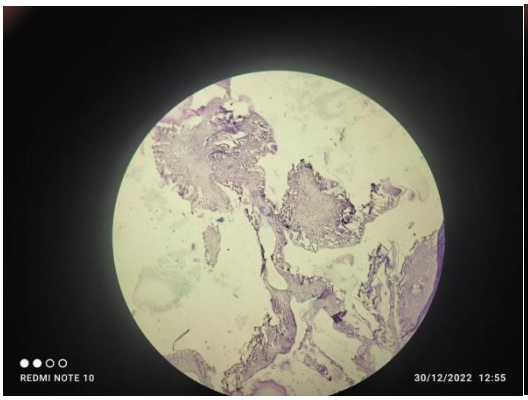
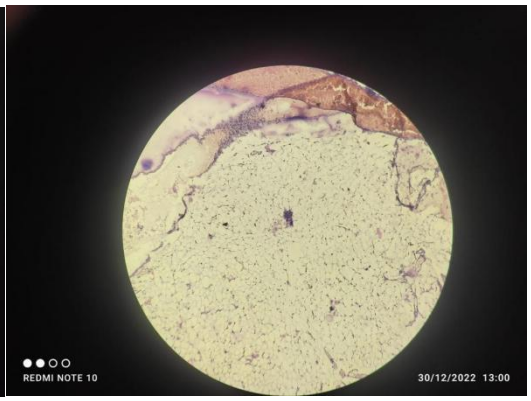


Figure 2

Histopathology report
Section study shows lining of flat epithelium at places and cuboidal epithelium at places with round to regular nuclei
Section also shows fibroadipose tissue
Suggestive of 'Benign cystic lesion' consistant with clinical diagnosis of 'omental cyst '





3. Discussion

Intra - abdominal cysts in children can arise from the solid organs, retroperitoneum, mesentery, or omentum. Omental cysts are confined to the lesser or greater omentum, and they can be of variable size. The cysts can either be unilocular or multilocular and they may contain hemorrhagic, serous, chylous, or infected fluid? - " In our patient, it was huge, (most possibly the largest from the omentum so far), unilocular, and containing thin serous fluid.

Presentation of omental cysts varies based on the size and site of the cyst. These cysts may be detected pre - operatively or intra - operatively incidentally when complicated with infection, torsion, or infarction in patients presenting with acute abdominal pain, abdominal distention, or ascites. Presentations with severe anemia, massive ascites, and teratomatous cyst were also reported, none of which was there in our patient. An accurate preoperative diagnosis of omental cysts is usually difficult and a correct preoperative diagnosis was reported in less than a quarter of the cases. ' Radiological imaging modalities are helpful in diagnosing omental cysts preoperatively but might be difficult to obtain right away in resource - limited settings.

When the diagnosis is made pre - operatively, open surgical excision is preferred over laparoscopic excision in order to avoid the risk of rupture and spreading of the cyst contents. Besides, laparoscopic removal may be difficult in children who have relatively smaller space for portal placement and subsequent manipulations, especially in cases of large cysts.

No matter the type of surgical intervention performed, total excision should be the goal in order to avoid recurrence. If total excision is not possible because of the size of the cyst or because of its location deep within the root of the mesentery, partial excision with marsupialization of the remaining cyst into the abdominal cavity is an option and approximately 10% of the patients require undergoing this form of therapy. If marsupialization is performed, the cyst lining should be sclerosed with 10% glucose solution, electrocautery, or tincture of iodine to minimize recurrence. ' In our case, after identifying the cyst, it was cautiously excised and removed without rupture.

Complications from surgery, either early or late, are uncommon. The main complication after surgical treatment is recurrence, which has been reported to occur in 9.5% of patients especially when resection is incomplete. Complications of the cyst include hemorrhage, torsion, infection, rupture, and symptoms related to pressure effects of

the cystic mass on the adjacent structures. * The child in the presented case had a large cyst with serous content, resected and she had no complications in the first 2 months of follow - up. But long - term complications like recurrence of the cyst needs additional follow - up.

4. Conclusion

Omental cysts are rare in children and have varieties of presentations. Preoperative diagnosis is challenging, especially in resource - limited settings with limited access to pre - operative imaging modalities. Hence, it is wise for clinicians working in resource - limited settings, where emergency imaging is unavailable and emergency laparotomy needed for an acute abdomen for an identified cause. It will be wise to consider omental cysts as a possible differential diagnosis in these children presenting with features of acute abdomen, and care should be taken to avoid intra - operative complications like rupture and spillage of the cyst/s into the abdominal cavity.

References

[1] Kurtz R, Heimann T, Holt J, Beck A. Mesenterie and retroperitoneal cysts. Ann Surg.1986; 203: 109 - 112. doi: 10.1097/00000658 - 198601000 - 00017
[2] Motie MR, Asadi M. Large omental cyst: a case report and review of the literature. Acta Med Iran.2011; 4: 690 - 693.
[3] Gupta S. Omental cyst: an atypical presentation in a child masquerading tubercular ascites with severe acute malnutrition and sickle cell disease. J Surg Surg Res.2017; 3 (1): 006 - 9.
[4] Sayced M, Benzamin M, Akter S, Mazumder MW, Karim AS, Dey BP. Omental cyst - rare cause of abdominal pain in a 7 - year - old child: a case report. Port J Gastroenterol.2021: 28 (3): 202 - 206. do: 10.1159/000510022
[5] Chateil J - F, Brun M, Vergnes P, Andrieu De Lewis P, Pérel Y, Diard F. Abdominal cystic lymphangiomas in children: presurgical evaluation with imaging. Eur J Pediatr Surg.2002; 12 (1): 13 - 18. do: 10.1055/s - 2002 - 25090
[6] Tan JJ - Y, Tan - K - K, Chew S - P. Mesenteric cysts: an institution experience over 14 years and review of literature. World J Surg.2009; 33 (9): 1961 - 1965. do: 10.1007/s00268 - 009 - 0133 - 0
[7] Sag S, Okatan BK, Metin N, Rare A. Cause of acute abdomen in a child: infected mesenteric cyst. Dicle Tip Derg.2019; 881 - 883. doi: 10.5798/ dicletip.661423
[8] SarperErikci V, Abay E, Köylüoglu G. Omental cysts mimicking acute abdomen in a 3 - year - old girl. Clin Diagn Pathol.2017; 1 (2). Available from: http: //oatext. com/Omental - cysts - mimick%C4%BIng - acute - abdomen - %C4%BIn - A - 3 - year - old - g%C4%BIrl. php.
[9] Antao B, Tan J, Quinn F. Laparoscopic excision of large intra - abdominal eysts in children: needle hitch technique. Case Rep Med.2015; 2015: 1 - 5. doi: 10.1155/2015/937191