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Case Study www.wjahr.com

OMENTAL CYST- THE GREAT MIMIC

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ABSTRACT

Large omental cyst is a great mimic of ascites clinically and radiologically. However there are important imaging features which aid in their differentiation.

KEYWORDS: Omental cyst, ascites.

INTRODUCTION

CASE REPORT

A three-year-old boy presented with history of acute onset abdominal distention and vomiting. On examination, there was mild fullness of the abdomen. However, no fluid thrill or shifting dullness was elicited. Ultrasound examination revealed ascites with uniform low level internal echoes. The child was further evaluated with contrast enhanced computed tomography of the abdomen which was reported as gross ascites. However, no cause for ascites could be identified. Routine biochemical investigations were all negative. The child was admitted for eight days and the abdominal distention reduced gradually and was discharged. The patient lost follow up due to the covid pneumonia crisis. The patient presented again with abdominal distention after three months. Ultrasound examination was repeated which revealed loculated fluid collection with uniform low-level echoes. Sliding movement was elicited between the cyst wall and the parietal peritoneum which made loculated ascites an unlikely diagnosis. Further evaluation with contrast enhanced computed tomography of the abdomen revealed well defined fluid attenuating lesion occupying almost full of the lower abdomen and extending along the right paracolic gutter upto the inferior aspect of liver. The lesion was closely abutting anterior and right lateral abdominal wall. Posteriorly, the lesion was closely abutting the retroperitoneal structures. The small and large bowel loops were displaced medially. Ascites was ruled out due to the mass effect seen and the absence of fluid between the bowel loops and in the dependent peritoneal recesses. A diagnosis of omental cyst of lymphatic origin was made. The patient underwent exploratory laparotomy which confirmed the diagnosis. Histopathology revealed it to be chylous type with cyst wall showing cholesterol clefts with foreign body giant cell reaction, haemorrhage, and granulation tissue formation. The postoperative period was uneventful.

IMAGES

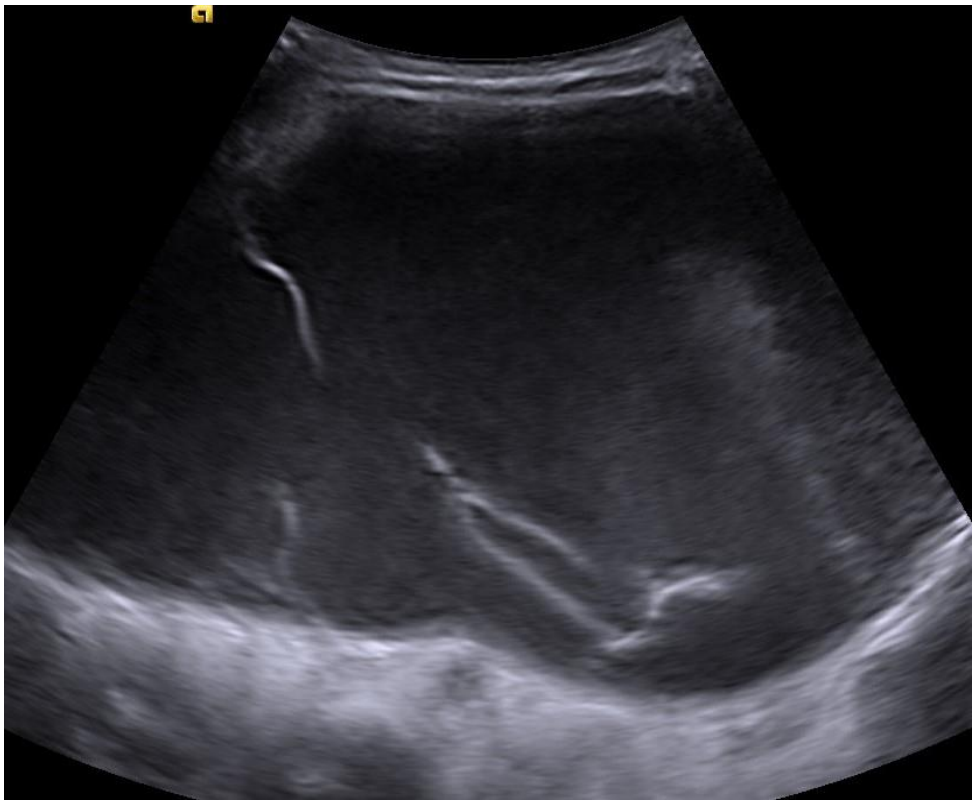


Image 1: Ultrasound image showing cystic lesion with multiple septations and uniform low level internal echoes.

Image 2: Initial computed tomography axial section showing large cystic lesion mimicking ascites, however causing mass effect and clustering of bowel loops in the centre.

Image 3: Follow up computed tomography axial section showing well defined cystic lesion in the right side of abdomen causing mass effect.

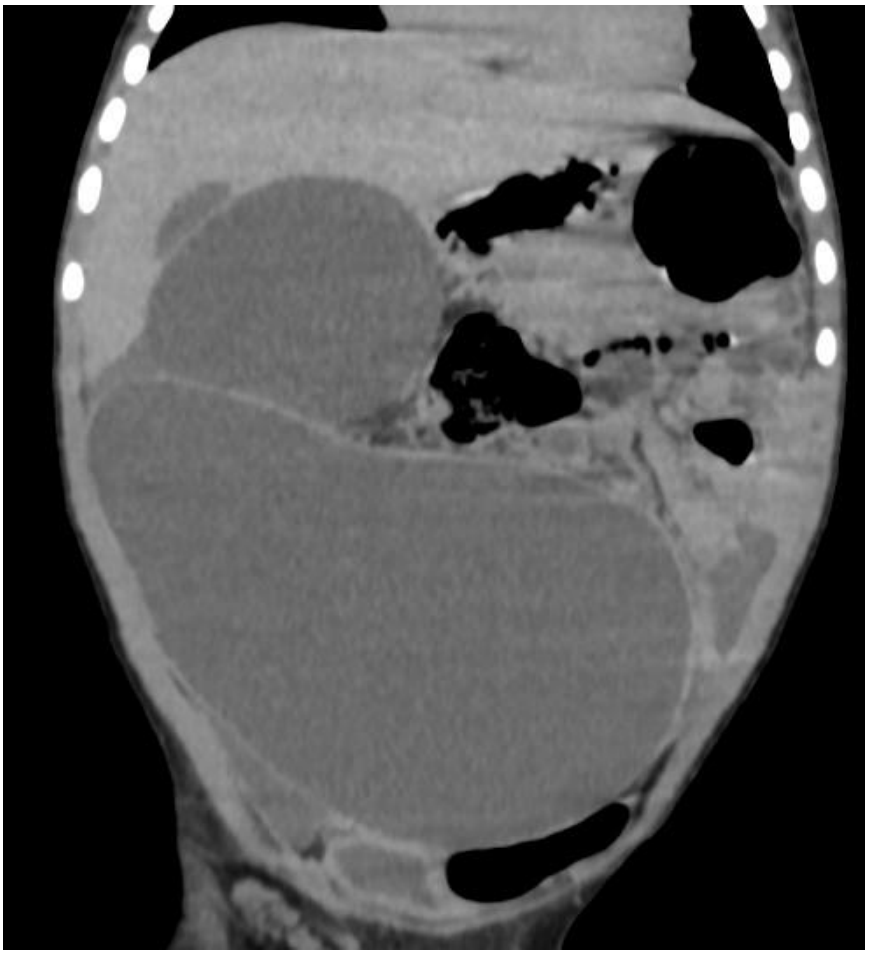
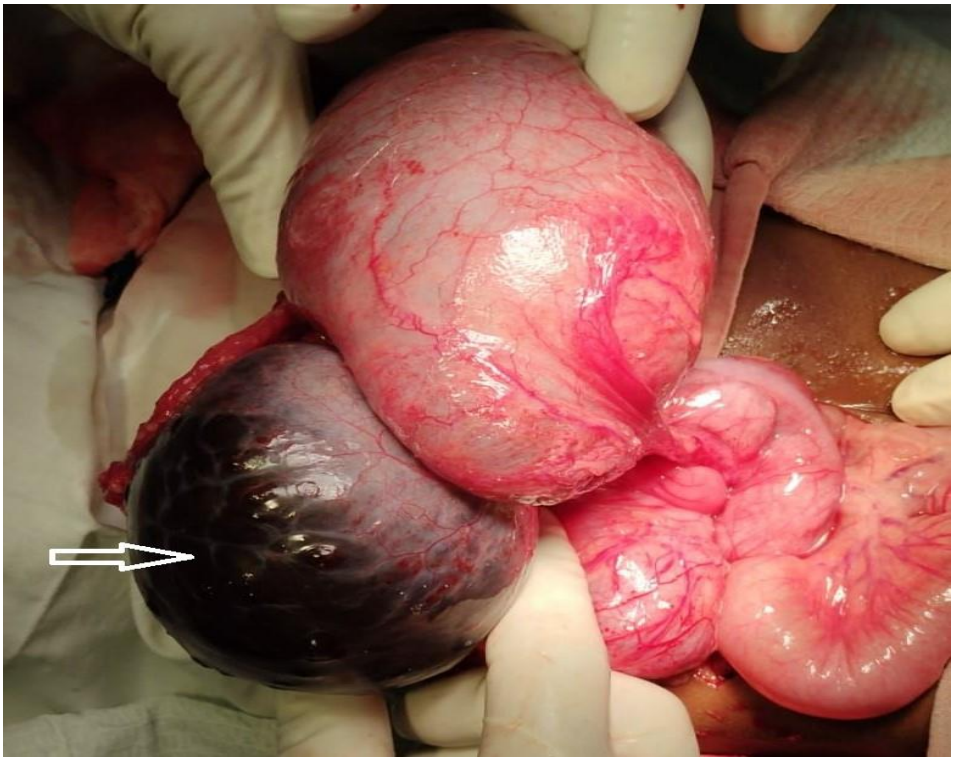


Image 4: a and 4b-Follow up computed tomography image coronal and sagittal sections demonstrating the extent of the cyst.

Image 5: photograph of the surgical specimen with the arrow mark showing the omental cyst.



DISCUSSION

Omental and mesenteric cysts are rare paediatric lesions with an incidence of 1 in 1,40,000 approximately.[1] Histologically they can be lymphangioma (the most common type), non-pancreatic pseudocyst, duplication cyst, mesothelial cyst and enteric cyst. Lymphangiomas are large, thin walled multilocular cysts which contain predominantly chylous fluid. Contents could also be serous or haemorrhagic fluid.[2]

They often present with abdominal distension, pain, vomiting or mass per abdomen. They can also undergo haemorrhage, infection or cause intestinal obstruction.[1]

Large lesions can mimic ascites clinically and radiologically. On ultrasound, omental cyst is usually multilocular with uniform internal echoes which is not present in simple ascites. However, it could also be unilocular and anechoic. Sliding movement between the peritoneum and the lesion may be appreciated with omental cyst which is absent with ascites since it's the fluid collection between the peritoneal layers.

Computed tomography helps in differentiation of the entities due to the mass effect exerted on the adjacent structures with clustered bowel loops and the lack of fluid in the dependent recesses of the peritoneum and between the bowel loops.[3] MRI helps in identification of the cyst content. Serous content appears hypointense on T1 and hyperintense on T2 weighted images while fatty and haemorrhagic contents appear hyper on T1 and T2 weighted images.[3]

Ideal treatment comprises of complete excision, either by open surgery or laparoscopy.[3]

CONCLUSION

Large omental cyst is a great mimic of ascites both clinically and radiologically. However, it can be differentiated with the help of specific features like multiloculation, mass effect exerted with clustering of bowel loops and the absence of fluid between the bowel loops and in the dependent peritoneal recesses. Sliding movement of the lesion against peritoneum if appreciated on real time ultrasound is a very useful differentiating feature.

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