

A rare case of paediatric giant omental lipoma

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Section: Paediatric radiology

Area of Interest: Abdomen Paediatric

Procedure: Contrast agent-intravenous

Imaging Technique: CT

Special Focus: Neoplasia Case Type: Clinical Cases

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Patient: 10 years, male

Clinical History:

A ten years old boy was brought to the paediatrics outpatient department with history of progressive abdominal distension for the past four years. There was history of associated on and off abdominal pain and constipation. No history of fever, diarrhoea or vomiting was noted. No history of urinary symptoms was noted. His past medical and surgical history was insignificant. Physical examination revealed a distended abdomen with mildly prominent superficial veins. On palpation, a bimanually palpable abdominal mass was noted that was soft in consistency. No tenderness was noted.

Imaging Findings:

The patient was subjected to abdominal ultrasound which showed gross hyper-echogenicity in the abdomen and was inconclusive. Hence, contrast-enhanced CT abdomen was done to rule out the possibility of malignant abdominal mass. CT showed a large gross fat-containing lesion (-84 HU) occupying the whole of the abdomen (Fig 1). It measured approximately 17.1 cm x 14.0 cm x 10.2 cm in size and was extending from D9 vertebra above to S2 vertebra below. The lesion was abutting the anterior and lateral abdominal wall and was displacing the bowel loops and the retroperitoneal structures posteriorly (Fig 1). No calcification or cystic component was noted in the lesion. There were omental vessels noted traversing through the lesion (Fig 1). Few thin internal septae were noted, however no associated mural nodularity or enhancing solid components were noted (Fig 2). No invasion/ infiltration into the abdominal organs were noted (Fig 3). Because the patient was symptomatic, he underwent laparotomy and it showed a large fat-containing lesion arising from the omentum with extension as described above. Histopathology confirmed it to be omental lipoma. No evidence of malignancy was noted.

Discussion:

Lipomas are benign tumours composed of mature adipocytes. These are the most common soft tissue tumours which can arise in any part of the body. Omental or mesenteric lipomas are extremely rare entities and even more so, in paediatric population. Not more than a dozen cases have been reported in the literature before [1]. Majority of paediatric omental lipomas are asymptomatic and are detected incidentally. However, few of them may cause variable nonspecific symptoms like progressive abdominal distension, anorexia, abdominal pain, weight loss and abdominal fullness [2]. There have been few reported cases of abdominal lipomas causing intestinal volvulus and presenting as acute abdomen [3]. Acute presentation in omental lipomas can also occur following its torsion in which case the patient presents with acute abdominal pain, nausea and vomiting. Imaging of omental lipomas by ultrasound shows relatively homogeneous echogenic lesion with internal septae and calcification in few of them [4]. CT and MRI show gross fat-containing lesion with extension and involvement along the abdomen and the pelvis. These imaging modalities can help to evaluate the mass effect of the lesion on the abdominal viscera. CT and MRI can also be used to rule out malignant features associated with the lesion as enhancing solid components within the grossly fatty lesion and infiltration of the lesion into the adjacent organs. The absence of calcification on CT, normal

Take-Home Message:

Paediatric omental lipomas are rare fat-containing lesions in the children with less than a dozen cases reported in the literature. Though these lesions can grow to a large size before diagnosis, these are benign encapsulated lesions and can be completely excised. Proper imaging evaluation can help in delineating the extension of the lesion as well as in ruling out other malignant fat-containing lesions in the abdomen. Since these lesions can recur after excision, follow up of the patients is advised to rule out the recurrence.

Written informed patient consent for publication has been obtained.

Differential Diagnosis List: Giant omental lipoma, Teratoma, Liposarcoma, Neuroblastoma, Hepatoblastoma

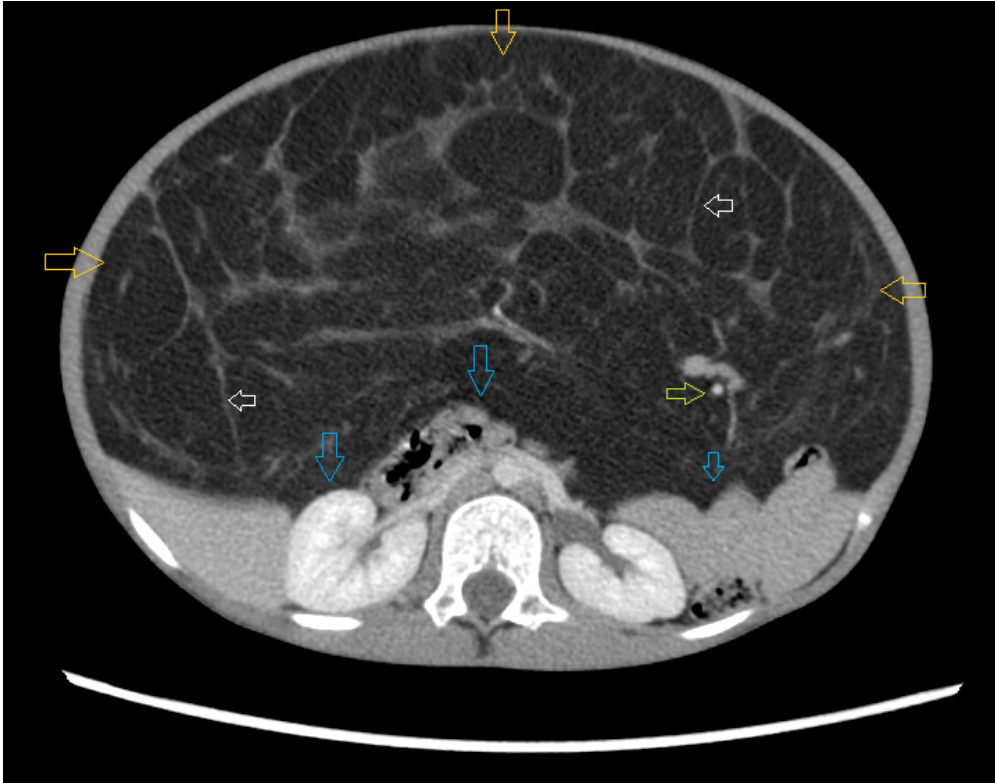
Final Diagnosis: Giant omental lipoma

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Figure 1

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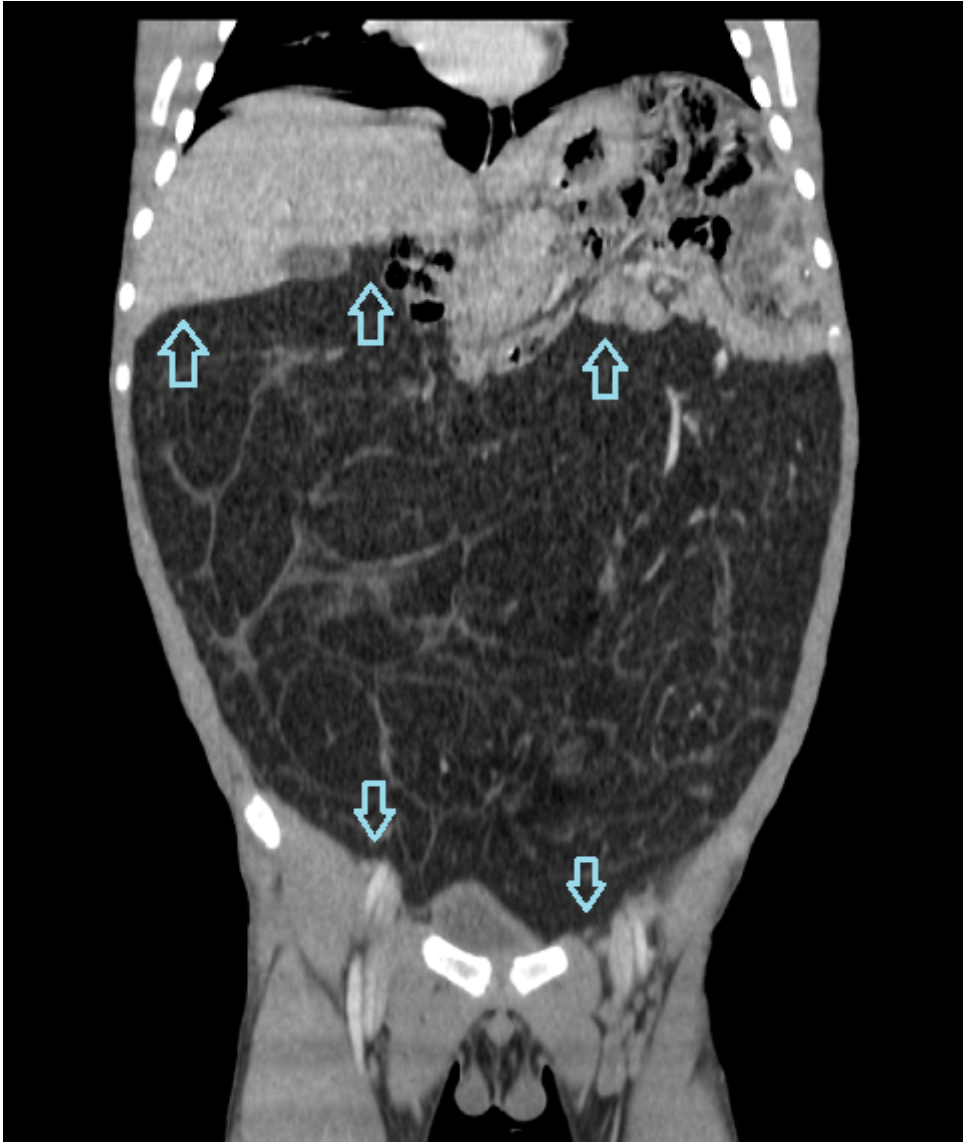


Description: Contrast enhanced CT abdomen soft tissue window axial view showing a large, gross fat containing lesion in the abdomen abutting the anterior and lateral abdominal wall (orange arrows). Thin internal septae (white arrows) and traversing vessels (green arrow) are noted within. Posteriorly displaced and compressed bowel loops and kidneys are also noted (blue arrows). **Origin:**

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Figure 2

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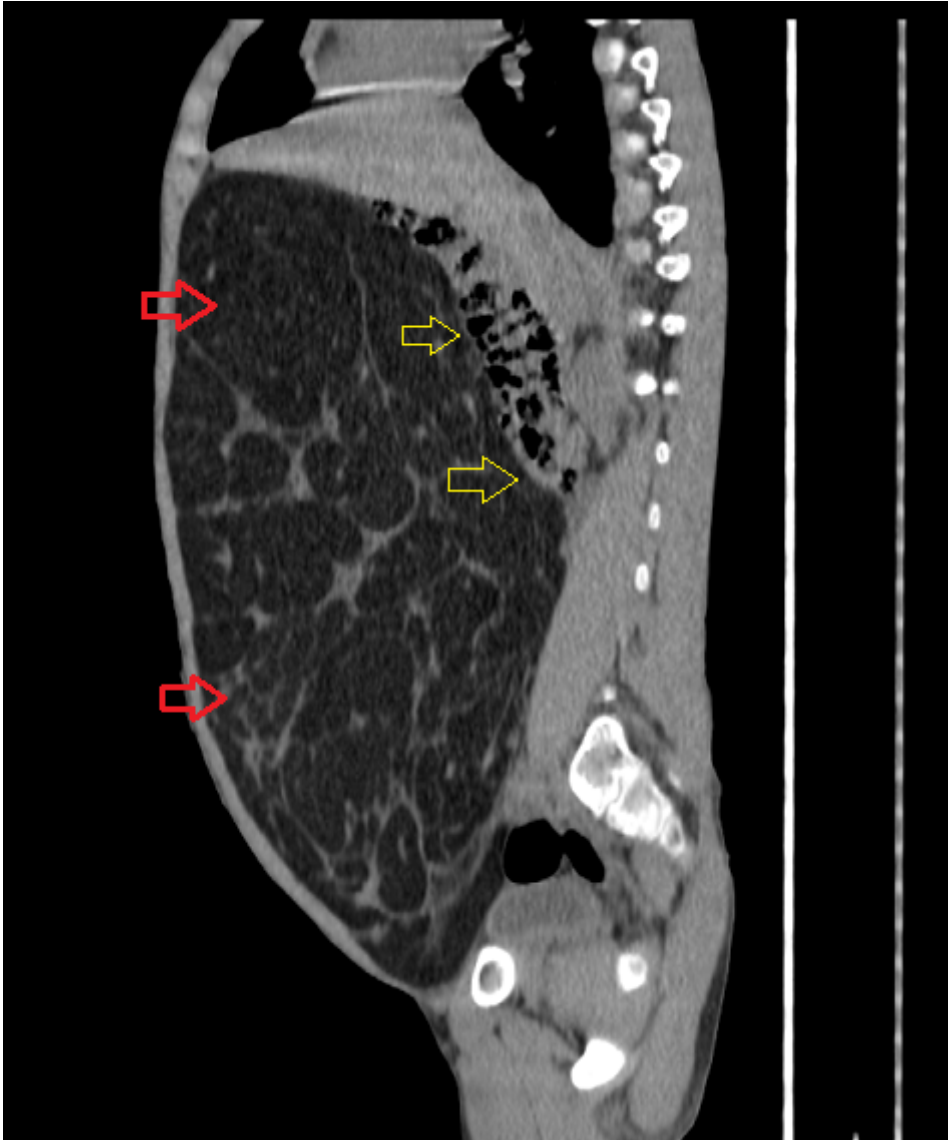


Description: Contrast enhanced CT abdomen soft tissue window coronal view showing large fat containing lesion extending from the subhepatic region to the pelvis (blue arrows). **Origin:**

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Figure 3

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Description: Contrast enhanced CT abdomen soft tissue window sagittal view showing large fat containing lesion anteriorly in the abdomen (red arrows) with posteriorly displaced abdominal viscera (yellow arrows). **Origin:** © Department of Radiodiagnosis and Imaging, Grande International Hospital, Kathmandu, Nepal.