Rare disease

Congenital omental cyst

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Summary

Congenital omental cysts are rare intra-abdominal pathology, which are difficult to diagnose preoperatively; as such a high index of suspicion is required for accurate preoperative diagnosis. We present a case of congenital omental cyst in a 3-year-old girl who presented with huge abdominal distension. We performed diagnostic examinations including ultrasonography and CT of the abdomen. An omental cyst was diagnosed because of its position and connection to the surrounding tissues. She was operated and cyst was excised completely. Histological examination revealed an omental cyst with endothelial lining and haemorrhagic fluid inside. She had an uneventful recovery and doing well, without recurrence at follow-up of 24 months. Clinicians must rigorously pursue a preoperative diagnosis, as it may prevent a surprise upon laparotomy and result in proper management.

BACKGROUND

The congenital omental cysts are rare, with an incidence of only about 1 in 140 000 hospital admissions, and is difficult to diagnose preoperatively because of the lack of clinical symptoms.¹ Only 2.2% of these cysts (mesenteric and omental cysts combined) are omental cysts. Moynihan rightly stated that 'Cysts of omentum are among the surgical rarities'. Till now, only about 150 cases are recognised, 68% of which were present in children less than 10 years of age.² This report describes a case of a congenital omental cyst diagnosed preoperatively.

CASE PRESENTATION

A 3-year-old girl presented in surgical outpatient department with a 3 month history of dull aching abdominal pain and swelling. Her abdominal swelling was increasing in nature. There was no history of vomiting, constipation, fever and jaundice. She had no surgical or other medical history. On examination, she was in distress, but afebrile and haemodynamically stable. She had mild pallor, but there was no icterus, oedema or lymphadenopathy. Abdominal examination showed generalised distension (figure 1), with dilated veins over skin, but there was no tenderness. The liver and spleen were not palpable. Percussion note was dull all over the abdomen with positive fluid thrill.

INVESTIGATIONS

Her haemoglobin was 11.1 gm%, rest of the blood investigations was within normal limit. Abdominal ultrasonography (US) demonstrated a monotonous, low echoic cystic mass, involving whole of the abdomen. A CT scan revealed a cystic lesion, 26×23×15 cm, caudad of the stomach and ventral to the colon with an interior of slightly high density (figure 2). All these findings indicated the presence of an omental cyst, and surgery was performed.

TREATMENT

She underwent laparotomy by means of an upper midline incision. A cystic mass, 27×24 cm in diameter, was seen arising from the greater omentum (figure 3). The cyst was isolated, and there was no evidence of invasion to the surrounding tissues. The cyst was resected completely after ligation of the right epiploic artery and vein, which were the main vessels supplying the tumour. The resected tumour was 27×24×15 cm and weighed 6.5 kg. It was unilocular, slightly yellowish brown (figure 4). The cyst contained haemorrhagic fluid. Pathological examination revealed endothelial cells on the internal wall confirming omental cyst.

OUTCOME AND FOLLOW-UP

The patient made an uneventful recovery and was discharged home on the fifth postoperative day. She has been fit and healthy with no recurrence of the disease on 12 months of follow-up.

Figure 1 Gross distension of the abdomen with dilated veins.

Figure 2 Computerised tomography scan image of the patient.

DISCUSSION

The congenital omental cysts are usually seen in children, with 68% of the cases occurring in those younger than 10 years of age. Omental cysts have female predominance, by a factor of 1.5 and also are more common in the white race than in non-white race.³ Beside congenital, it may be traumatic, neoplastic or infectious in origin, giving rise to vague clinical features and may be a cause of the surgical acute abdomen, especially in children.⁴

The typical presentation of omental cyst is usually abdominal distension and pain, sub-acute intestinal obstruction with palpable freely movable abdominal mass, however, the lump is palpable in 25–50% of cases only.¹ The cysts are incidental findings in approximately 40% of the cases.⁵ Disorders of the respiratory or urinary system, in addition to symptoms caused by compression of the portal vein, are often seen because of cyst enlargement. Between 11 and 19% of patients present with acute abdominal symptoms due to torsion, bleeding or rupture of a cyst.^{2 6} They may remain asymptomatic and grow to a great magnitude containing over 3 litres of fluid.⁷

Blood tests often indicate leucocytosis or anaemia. A correct preoperative diagnosis of omental cyst has been

made in only about 13–25% of reported cases,^{8 9} although improvements in US and CT now enable us to diagnose this disease prior to surgical intervention.¹⁰ Our patient underwent US and CT scanning, allowing us to locate the cyst precisely and identify its relation to the surrounding tissues, leading to a diagnosis of omental cyst. With the advent of frequent abdominal scanning for a variety of reasons, it is likely that more of these lesions will be identified in the future.

Lymphangioma is the most common type of omental cyst, accounting for 67.7% of cases. The present case was classified as lymphangioma by pathological analysis. The preferred treatment of omental cyst is total excision, even if the patient has no symptoms, because of the possibility of torsion, rupture, bleeding and infection.⁸ Bowel resection is rarely necessary and recurrence is rare. Malignant degeneration of omental cyst is rare; only a small number of cases of sarcoma and adenocarcinoma transformation have been reported.⁵

Although laparoscopic management of omental cysts has been documented in recent reports, we had to make an additional incision to remove the tumour from the abdominal cavity because of the size of the cyst. Some authors reported

Figure 3 Huge omental cyst (black arrow) in continuity with the greater omentum (white arrow).

Figure 4 Cut-open omental cyst.

the benefits of performing hand-assisted laparoscopic cystectomy and aspiration for large cysts, but emphasised the risk of spillage from the cyst if it is found not to be benign.¹¹ Although we diagnosed an omental cyst, we performed open cystectomy to avoid spreading the fluid.

CONCLUSIONS

Congenital omental cysts are rare, and it must always be considered in the differential diagnosis of abdominal cystic lesions. The standard management has not been established. This case was reported because a collection of cases can help establish a consensus on the diagnosis and treatment of this unusual entity.

Learning points

- ▶ Congenital omental cysts are probably rarely reported.
- ▶ Primary treatment is the complete surgical excision of the cyst even when asymptomatic because of its potential to develop complications.
- ▶ Early surgical treatment can prevent life-threatening complications that include torsion, rupture, bleeding and infection.

Competing interests None.

Patient consent Obtained.

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