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Case Report Open Access

Giant Mesenteric Cyst Co-Existing with Pregnancy at Term

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Abstract

Mesenteric cyst is a cyst related to the mesentery of the small bowel, a rare benign abdominal tumour that grows along the root of small bowel mesentery. It is often diagnosed incidentally on routine abdominal examination or radiological investigation for a progressive abdominal swelling or present as an emergency due to complications. It may present with acute abdominal pain due to haemorrhagic degeneration, secondary infection, torsion or rupture with subsequent peritonitis. It thought to originate from various embryological misnomers without a consensus on its aetiopathogenesis. Surgical excision remains the best method of treatment. Diagnosis is often missed despite the description of its clinical demonstrative features by the French Surgeon Paul Jules Tillaux. We present a case of giant (6 kg) mesenteric cyst that co-existed with pregnancy. Based on the literature review, this may be the first reported case of such co-existence.

Keywords: Giant mesenteric cyst; Pregnancy; Co-existence

Introduction

Mesenteric cyst is a rare benign abdominal tumour that is seen in 1:100,000 populations and is said to be responsible for 1: 240,000 hospital admissions [1,2]. It has been estimated that about 822 cases were seen since it was first reported in 1507. Majority of cases are asymptomatic [3]. Gastrointestinal symptoms such as vague abdominal pain, nausea, vomiting, abdominal distension or constipation are however, common symptoms elicited. Many patients, particularly those in the rural areas, will only present if it is complicated. It often present as an acute abdomen when complicated [3]. Clinical abdominal examination will often reveal the eponymous Tillaux Triad of: Soft fluctuant swelling in umbilical region, free mobility in direction perpendicular to mesentery and zone of resonance all around the cyst [4,5]. A high resolution abdominal ultrasound scan will open reveal a cystic mass, but, an abdominal CT scan reveals the diagnosis more explicitly. The rarity of this pathological entity and the nonspecific symptoms of its uncomplicated presentation make its diagnosis difficult. This difficulty becomes accentuated in the presence of a growing gravid uterus. The coexistence of a huge mesenteric cyst with a pregnancy at term is likely to create a diagnostic conundrum and the presence of the pregnancy is likely to prevent the deployment of CT scan for the diagnosis because of the exposure of the foetus to such a high radiation dose.

Case Report

A 34-year-old gravida 6 para 5 lady presented to the 0bstetric clinic of a tertiary health facility in North-eastern Nigeria with full term gestation and complain of vague abdominal pain and distension of a seven-year period. Pain is said to be dull aching, worse with standing erect or lying supine and unrelated to food consumption. Abdominal distension was said to be slowly progressing with no history suggestive of bowel obstruction. She had 3 home deliveries for full term pregnancies during these periods and the distension persisted all through.

A giant unilocular cystic mass measuring 30*35 cm, separate from the gravid uterus was noted with demonstrable Tillaux Triad on palpation and auscultation (Figure 1). Abdominal ultrasound scan revealed a live singleton foetus at term coexisting with a giant mesenteric cyst. An assessment of biological markers for malignancy were found to be within normal range except for the beta-HCG, which could be explained by the presence of the pregnancy. She had a supervised spontaneous vaginal delivery of a normal male infant weighing 2.8kg and an uneventful puerperal period. She was prepared for and had a laparotomy at 6 weeks postpartum and the giant mesenteric cyst with benign features was seen.

It was along the root of the small bowel mesentery and was also attached to the Meso-colon. Surgical excision was done and it weighed 6 kg. About 25 litres of clear serous fluid was drained and no septations or calcification was noted on the wall. Histopathological assessment showed a benign mesenteric cyst (Figure 2).

Figure 1: According to this diagnosis a giant unilocular cystic mass measuring 30*35 cm, separate from the gravid uterus was noted with demonstrable Tillaux Triad on palpation and auscultation.

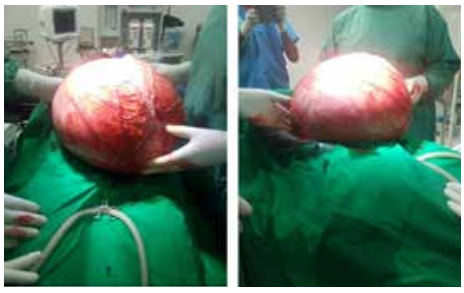

Figure 2: Surgical excision was done and it weighed 6 kg.

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Discussion

An incidental finding by the Italian Anatomist Benevenne during an autopsy on an 8year old boy led to the first description of Mesenteric cyst [4]. Although various theories were put forward to explain its pathogenesis, a consensus is yet to be reached [2]. It has no gender preponderance and could be seen at any age. It is reported to be seen predominantly in children below 15 years of age [4]. It can grow to such a big size to cause pressure symptoms. The compressive effect is mainly on the bowel, intra-abdominal parts of the inferior vena cava and the Aorta or rarely the gonadal vessels. It remains asymptomatic for some time until it compresses on adjacent organs or becomes complicated [2,6]. Pathologically, it has been classified in to four, although some authors added some malignant variants. The major classes are: Chylo-lymphatic cyst, Enterogenous cyst, Urogenital remnant and Dermoid cyst [7,8].

This basic pathological classification determines clinical presentation and also the extent of surgical excision intraoperatively.

Chylolymphatic cyst

This is the most common pathological type. It is thought to arise from congenitally misplaced lymphatic tissue that has no efferent communication with lymphatic system. It is often thin walled cyst lined by flat endothelium which secrete clear lymph or chyle. It is often unilocular than multilocular and solitary usually. it has a blood supply independent of intestine. It is safe to completely excise the cyst without endangering the intestinal blood supply and often without gut resection.

Enterogenous cyst

Considered to be a derivative of diverticulum of mesenteric border of intestine that has been sequestrated during embryonic life, although, it is also purported to be an intestinal duplication cyst. It is mostly thick walled cyst with mucous lining. The content may be serous, straw-coloured or dark brown following haemorrhagic degeneration. It derives its blood supply from intestinal mesenteric vascular supply; excision may necessitate resection and anastomosis of related part of intestine. If the Enterogenous cyst share same vascular supply with a segment of a bowel or it completely incorporates major intestinal vessels, controlled drainage of the content and subsequent marsupialisation of the wall could be done. Although drainage and subsequent injection of sclerosant has been tried for such cysts, results are not encouraging.

Other possibilities include remnants of Mesonephric ducts, dermoid cyst or mesothelial lesions.

CT scan eases diagnosis [9], but, presence of pregnancy limits its application in our index patient. She had three unsupervised pregnancies with unsupervised home deliveries. She sought care at a tertiary centre mainly due to the presence of the abdominal mass.

It is therefore pertinent to ensured detailed clinical examination and deploy appropriate radiological assessment tool in establishing the cause of vague abdominal pain and progressive abdominal swelling.

A detailed exploration is required intraoperatively in any case of mesenteric cyst in order to define its type, relationship with adjacent bowel loops and mesenteric vessels. Total cystectomy is the best treatment option.

Conclusion

Mesenteric cysts are rare abdominal cysts with non-descript presentation and has the potential of life threatening presentation if it becomes complicated.

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