That Grossly Enlarged Abdomen is an Unusual Huge Mesenteric Cyst After all: Case Report and Literature Review

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Abstract

We report a case of a married lady living with her husband for 8 years, who in the past 5 years developed an enlarging abdomen, which neighbors and in-laws thought was pregnancy but later turned out to be a huge mesenteric cyst. Arriving at a diagnosis by clinical methods and available tools with certainty failed and the inability to afford the state of the art diagnostic tools caused the surgeon to revert to exploratory laparotomy.

Key words: Abdomen, huge, mesenteric cyst, unusual

Introduction

Mesenteric cyst is a rare differential diagnosis for an intra-abdominal mass. However, it has never been reported to enlarge to the extent of been mistaken for pregnancy by the sufferer or her neighbors. The literature reviewed gave measurements ranging from 3 cm to 25 cm, but this case measured 93 cm by 61 cm circumferentially on the long and short axes. Most mesenteric cysts are asymptomatic, but it is rather very uncommon that the cyst this huge did not give any significant symptom. The patient presented because she wanted to end the perceived myth surrounding her condition. In a resource poor country like ours and in a situation where the patient had initially channeled her meager resource wrongly, the inability to afford the state of the act diagnostic tools made the surgeon revert to a surgical alternative. This case report shows that exploratory laparotomy is still within our surgical exploits when a preoperative definitive diagnosis is impossible.

Case Report

We present a 29-years-old married lady cohabiting with the husband for 8 years. She had occasional abdominal pains long before she got married. Three years after marriage, she noticed a slight abdominal enlargement that continued to increase in size very slowly for the next 5 years. At the early stage, she thought she was pregnant but she continued to have her menstrual flow though irregular, scanty, and shorter. Her abdomen continued to enlarge, and her neighbors who also thought she was pregnant were making fun of her for having a long overdue date. Later, she started feeling heaviness in the abdomen. There was no vomiting, no change in bowel habit and no urinary symptoms.

She was pale and undernourished. A huge firm centrally placed intra-abdominal mass extending into the pelvis was palpated. There was no tenderness, and one could get above, beside, and below the mass that was fairly mobile. Bimanual vaginal examination showed a slightly small uterus with free adnexa. Digital rectal examination showed a ballotable mass free from the rectum. A tentative diagnosis of the mesenteric or omental cyst was made, but the huge size made us unsure. Plain abdominal X-ray was not conclusive as it showed a huge blurred opacity with surrounding loops of bowel. Ultrasound scan reported ascites from unknown origin and ovarian cyst. Her hemoglobin was 8.4 g/dl, white cell count and differential were normal so were urinalysis, serum electrolytes, urea, creatinine, and blood sugar. Computerized tomography scan and magnetic resonance imaging though useful in the diagnosis and the treatment plan, were not affordable.

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The plan was to perform a diagnostic exploratory laparotomy and deal with whatever was the problem. Three pints of HIV and hepatitis B screened blood were cross-matched. Informed consent was obtained and under general anesthesia with endotracheal intubation, exploratory laparotomy was done via a midline approach. Thorough look and assessment of the intra-abdominal organs was done. An ovoid firm mass occupying a large space in the abdomen extending into the pelvis was observed. The small intestine was largely plastered and hypoplastic. Manual exploration showed that the mass was free and so was delivered to the surface. This was done easily by enlarging the wound just enough for that purpose combined with a little traction. Further look indicated that the mass was arising from the sigmoid mesocolon with a stalk attached to the superior surface of the mesentery close to its root. It seemed to be a sequestered mesenteric cyst as it is not lying within the mesenteric sleeve as expected of the typical mesenteric cyst. The huge vascular pedicle [Figure 1] was pulsating in line with the pulse oximeter beeps. An avascular plane was identified, and the stalk separated into two halves and each half doubly ligated with vicryl 2. The stalk was then divided and the mass removed for histopathology. The macroscopic features suggested benign as shown by the smooth surface, freely mobile, no adhesion, no infiltration, and no significantly enlarged lymph nodes [Figure 2]. The histopathology later confirmed well-differentiated endothelial cell lining interspaced with the smooth muscle-lymphangiomatous cyst. The site was checked at normal blood pressure to ensure that there was no bleeding. With the mass off, another look was done, and we were satisfied that there was no other lesion. The wound was closed in three layers. Postoperative care was commenced, and the patient made an uneventful recovery and was discharged on the eight postoperative days. She was referred to the fertility clinic.

Discussion

Mesenteric cyst is a rare intra-abdominal lesion. Incidence is estimated to be about 1 in 100,000–250,000 general hospital admissions.[1,2] There is no sex predilection.[3,4] In females, one is more likely to consider lesions such as ovarian cyst, pedunculated fibroid or malignancy. The rarity in addition to the fact that there are no characteristic clinical and radiologic features cause diagnostic difficulties. There are no known reports in the literature of this giant-sized mesenteric cyst. It measured 93 cm by 61 cm circumferentially along its long and short axes. It weighed 3.4 kg. Some authors reported cysts of varying sizes measuring 3–25 cm.[5] Probably, it was able to grow to this size without significant symptoms because of the sequestration. If it were growing within the mesenteric sleeves, it could have grown into the mesenteric side of the intestine and probably caused intestinal obstruction. However, some authors have also noted giant sized cysts without symptoms[5] but, in general, symptoms are related to size and location.[1,3,4] The reason this patient presented was the perceived myth surrounding her prolonged abdominal enlargement and not because of symptoms.

Most cases of mesenteric cysts occur in the ileal mesentery 70% while the remaining occurs in the sigmoid mesocolon.[6,7] The majority of the cysts is asymptomatic and is incidental findings during laparotomy just like in our case. The etiology of mesenteric cyst is said to be from blockage of lymph channels from trauma, infection, or neoplasm[8] or due to the ectopic proliferation of lymphatic channels that do not have a connection with the main lymphatic channels. Complications include intestinal volvulus, rupture presenting as acute abdomen, malignant transformation in 3% of cases[9] and cases of stalked cyst–torsion. Malignant transformation occurs in the locally infiltrating lymphangiomatous cyst. It is not known to occur in chylous or lymphatic mesenteric cysts.

With recent innovation in diagnostic medicine, many surgeons are likely to approach the abdominal cavity with a near 100% definitive diagnosis. Even where such high-tech diagnostic tools are available and affordable, in some cases, definitive diagnosis of mesenteric cyst is still elusive. In a series of seventeen suspected cases, contrast enhanced computed tomography scan was able to clinch the diagnosis in eleven cases 65%.[6] Ultimately, this will help the surgeon to plan the

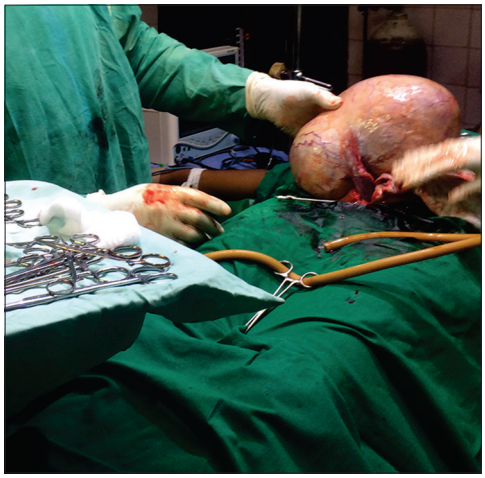

Figure 1: Huge mesenteric cyst with a huge vascular pedicle

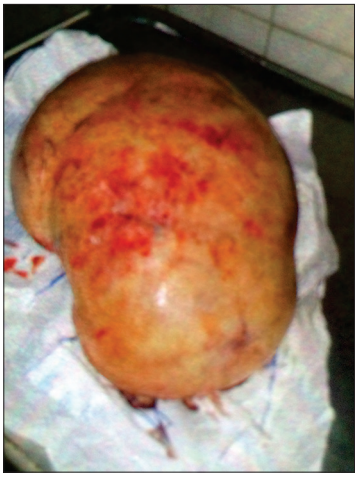

Figure 2: Huge mesenteric cyst with smooth surface, no infiltration suggestive of benign lesion

operation to a greater detail. Similarly, where these facilities or the personnel or the fund are not available, exploratory laparotomy for definitive diagnosis, and treatment may be the alternative. However, the surgeon must be conversant with the anatomy and should have the skill to navigate any lesion found.

The best treatment option is complete excision (cystectomy).[8] This is preferably done without compromising the viability of the adjoining intestine otherwise the surgeon should be ready to do a resection and primary anastomosis of the small bowel.[10] In the case of the sigmoid, a temporal colostomy is needed. Marsupialization and marginal lining cauterization, as well as enucleation, are less attractive surgical options because of infection and high risk of recurrence. Furthermore, constant follow-ups are necessary for locally infiltrating lymphangiomatous cysts even after a total cystectomy because of the increased recurrence rate.[5] In this index case, the treatment option was easy by simply double ligating the stalk and excising the cyst whole from the stalk without any worry of injury to the mesenteric vasculature or the intestine.

Conclusion

The diagnosis of mesenteric cyst is sometimes missed even with the high tech diagnostic tools. They are useful but when not affordable, diagnostic exploratory laparotomy becomes necessary.

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Conflicts of interest

There are no conflicts of interest.

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