

## CASE REPORT

# Case report: elective removal of a large mesenteric cyst—our approach

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## Abstract

A mesenteric cyst is rare intra-abdominal pathology, with little literature to guide us on how to diagnose and manage it. We report the incident of a 57-year-old female who had an incidental finding of a sigmoid mesenteric cyst whilst undergoing an operation under the care of the Gynaecologists. A computed tomography scan and a flexible sigmoidoscopy followed to help diagnose the lesion as a cyst. A month later the  $10 \times 15 \text{ cm}^2$  cyst was excised laparoscopically with no complications.

## INTRODUCTION

Mesenteric cysts are rare intra-abdominal lesions [1–4]. They occur in both adults and children with an incidence of 1/10 500–25 000 of adult surgical patients [5]. They are mostly found incidentally but patients with these cysts can sometimes present with non-specific complaints of abdominal pain and distension, or an abdominal mass [1]. They commonly originate in the small bowel mesentery, mesocolon (24%), retroperitoneum (14.5%) and very rarely from the sigmoid mesentery [6]. To diagnose these cysts, patients often require radiological investigations such as ultrasonography (USS), computed tomography (CT) and magnetic resonance imaging (MRI) [7]. Depending on their symptoms and location, these cysts can either be treated conservatively, or by open or laparoscopic surgical excision, and histological examination is often required to identify the origin of the cyst.

## CASE REPORT

In this report, we present a case of a 57-year-old female patient with a  $10 \times 15 \text{ cm}^2$  mesenteric cyst of the sigmoid colon that was excised laparoscopically and histopathology reported a cystadenoma. A 57-year-old female attended rapid access clinic complaining of left iliac fossa pain and swelling for ten months.

She was reviewed by the Obsteric and Gynaecology team and an ultrasound scan of the pelvis was arranged which found a  $116 \times 94 \times 76 \text{ mm}^3$  cystic lesion probably from the left ovary. Following further investigations, (which were all normal) the patient was listed and consented for laparoscopic assisted vaginal hysterectomy, bilateral salpingo-oophorectomy and peritoneal washing. During the operation the Gynaecologist found a large  $10 \times 15 \text{ cm}^2$  cyst attached to the mesentery of the sigmoid colon free from the ovaries. The operation was suspended and the on call general surgical team were called into theatre. A diagnostic laparoscopy was performed; all other organs were normal, however, due to the size it was difficult to assess the anatomy of the cyst and which other organs were involved, the only thing that was certain was this was not an ovarian cyst, therefore proceeding to operate would be risky. The on call consultant general surgeon did not see this as an emergency and suggested that the operation should be aborted and further investigations were required before proceeding with an operation on the cystic mass. An outpatient CT abdomen and pelvis scan plus a flexible sigmoidoscopy was arranged with an outpatient follow up appointment with the general surgeons. The flexible sigmoidoscopy came back as normal and the abdominopelvic CT scan revealed an  $11 \times 10 \times 8 \text{ cm}^3$  likely benign cyst but could not determine its origin (Figs 1 and 2).

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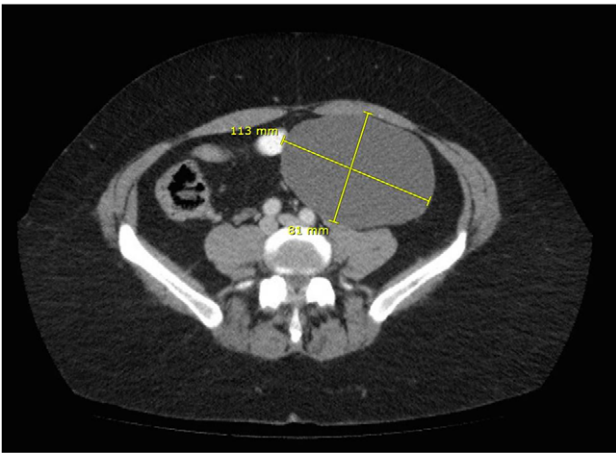


Figure 1: CT scan showing cyst.



Figure 2: Coronal plane of CT.

Due to the persisting discomfort the patient was booked and consented for an elective laparoscopic removal of cyst with possibility of converting it to an open procedure due to the size of the mass. The operation was approached laparoscopically using two 12 mm ports and a 5 mm port. The two 12 mm ports were placed through the umbilicus and also in the right iliac fossa (RIF) and the 5 mm port was placed suprapubically. The cyst was then excised entirely using diathermy. To help remove the cyst 400 ml of fluid was drained using an aspiration needle. The 12 mm port in the RIF was then replaced by a 15 mm port to allow us to place an endocatch into the abdominal cavity and extract the cyst. This was done successfully with no complications (Figs 3–6).

The rest of the abdominal cavity was washed with normal saline and closed. Since, the patient has made a full recovery and is completely symptom free. The histology report suggests the mass to be a borderline mucinous cystadenoma with either ovarian or appendiceal origin.

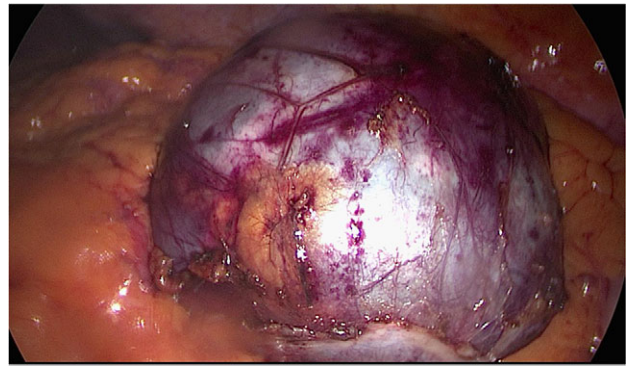


Figure 3: Image of sigmoid mesenteric cyst.

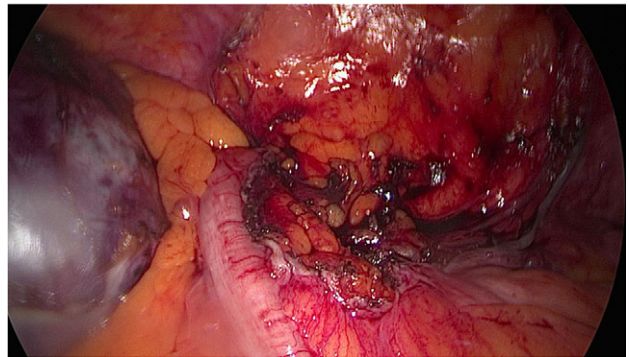


Figure 4: Sigmoid mesentery with cyst excised.

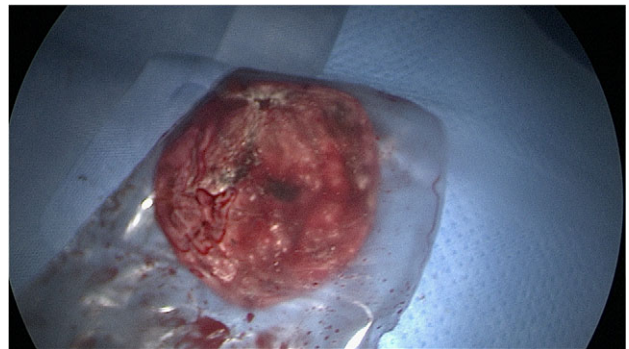


Figure 5: Cyst drained and removed using an endocatch.

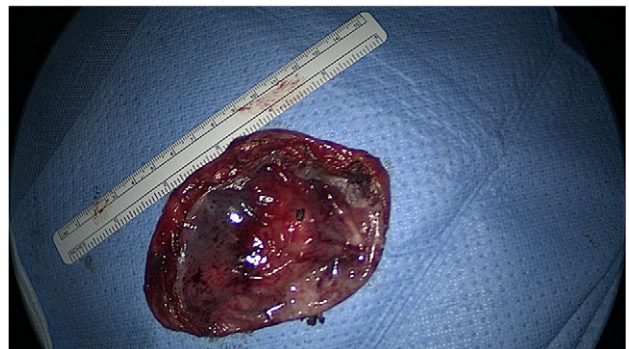


Figure 6: Cyst drained measuring about 11 cm.

## DISCUSSION

Little information is available in the literature on how to manage patients with symptomatic mesenteric cysts. In addition to being a rare entity, these cysts can pose a diagnostic challenge because patients often present with non-specific symptoms and an excision biopsy is often required to ascertain the origin of the cyst. In the case we describe here, the patient presented with left iliac fossa pain and swelling for 10 months, which are similar to the symptoms mentioned by Bhandarwar *et al.* [1]. Other possible symptoms can be suprapubic abdominal pain and back ache for 2 months [7] or 4 days duration of generalised abdominal pain that had moved to the RIF associated with diarrhoea and vomiting [8].

Investigations for sigmoid mesenteric cysts have previously included USS and CT [1, 7]; while in one case the symptoms were so severe that no radiological investigations were performed and the patient was taken to theatre for laparotomy for suspected appendicitis [8].

The approach to managing mesenteric cysts vary in the literature. In the acute setting papers have suggested that laparotomy should be the method of choice [8] but more recently there has been a shift to favour a laparoscopic approach [1]. Various laparoscopic techniques have been reported, however, the optimal approach for the best outcome is still unknown due to the rarity of the condition.

Although these cysts are found in the sigmoid mesentery, they can have communication with other organs that they may have originated from in the first place [6]. In the case we described we found on histological examination that the cyst was a cystadenoma. In the reports that we found during our literature review the histological findings were a benign mucinous mesenteric cyst [7] and a benign lymphangioma [1] and a mesenteric cyst with a thin fibrous wall, showing early and mild acute inflammation [8].

## CONCLUSION

The paucity of literature on mesenteric cysts makes it difficult to create a gold standard for the management of these patients,

however, in other most similar cases there has been a thorough step-wise approach. Most patients are managed electively with an investigation in the form of an USS or CT scan to establish the characteristics of the mass and its involvement of surrounding structures. Where possible a laparoscopic approach is favourable. Various laparoscopic techniques have been reported, however, the optimal approach for the best outcome is still unknown due to the rarity of the condition.

## CONFLICT OF INTEREST STATEMENT

None declared.

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