Asian Journal of Case Reports in Surgery

Volume 17, Issue 4, Page 1-7, 2023; Article no.AJCRS.97436

A Case Report of Huge Mesenteric Cyst in a Woman of Reproductive Age with Lessons of Interest

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/97436

Case Report

Received: 08/01/2023
Accepted: 11/03/2023
Published: 18/03/2023

ABSTRACT

A mesenteric cyst is an uncommon, mainly benign, intra-abdominal tumor. Treatment is surgical, consisting of excision of the cyst and involved organs to prevent possible recurrence. We report the case of a 42-year-old woman with gradually increasing abdominal distension and a Computed Tomography scan diagnosis of left complex cystic ovarian mass. Her spirituality was a set back to her health seeking behaviour. An exploratory laparotomy was performed and a mesenteric cyst

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was found. This was removed in addition to a segment of the ileum which was resected and anastomosed. Her recovery was uneventful. A histopathology report confirmed the diagnosis of benign mesenteric cyst.

Keywords: Mesenteric cyst; abdominal pain; radiology; spiritual healers.

1. INTRODUCTION

A mesenteric cyst is an uncommon, mainly benign, intra-abdominal tumour occurring approximately in 1/100 000 adult patients and 1/20,000 children attending a hospital [1]. "It can occur anywhere in the mesentery of gastrointestinal tract from duodenum to rectum but the most frequent location of these lesions is the mesentery of the small intestine (60 %), followed by the ascending colon (24 %), and the retroperitoneal region (14.5 %)" [2,3]. "Mesenteric cysts may be completely asymptomatic with a subsequent appearance of nonspecific symptoms such as intermittent abdominal pain, abdominal distension, diarrhea, or palpable abdominal mass, acute abdominal or intestinal obstruction symptoms, which are directly related to the size of the lesion" [4]. "Diagnosis is mainly with different imaging studies, such as ultrasonography and computed tomography (CT). The computed tomography is the most used since it shows cyst contents, wall size, presence of septa and, if contrast medium is added, information on the relationship of the mass with vascular structures or other adjacent structures" [1]. "Total cystectomy is the therapeutic method of choice. Open method is preferred to the laparoscopic approach because of the achievement of complete cyst enucleation and a low recurrence rate" [5,6].

This case report presents the clinical case of a 42-year-old widow who was brought to the hospital with distended abdomen, and features suggestive of anaemic heart failure. The CT scan report of the abdomen gave a diagnosis of left ovarian cyst but at laparotomy a giant mesenteric cyst was found and resected. Histopathological examination confirmed a mesenteric cyst which was benign. Delay in presentation was attributed to the influence of spiritual healers which resulted in complications and difficult surgery.

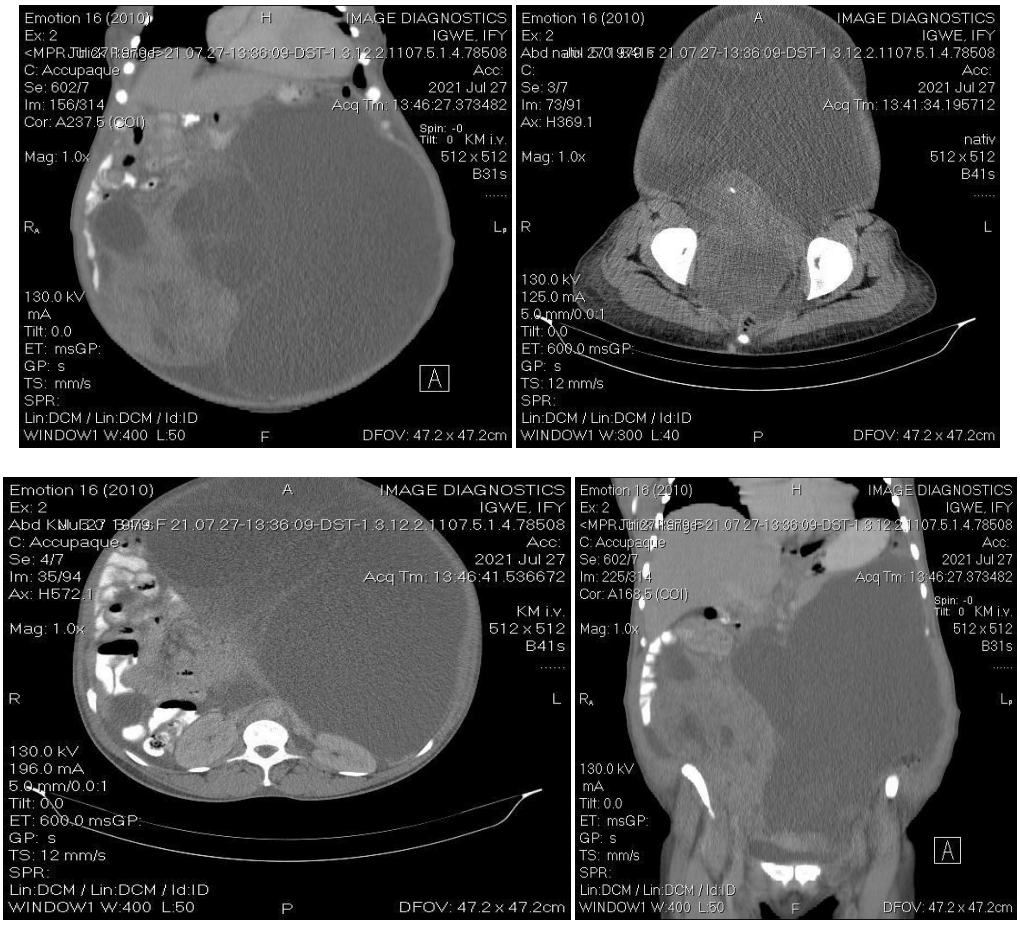
2. CASE REPORT

A 42-year-old widow was brought to the hospital in a wheelbarrow presenting with three-year history of progressive abdominal distension, two-week history of breathlessness and bilateral leg swelling. There was no associated fever, constipation or diarrhoea, vomiting but there was loss of appetite and weight loss. Her past medical history was unremarkable. She was a Para 3^{+0} (three alive) lady. Her last confinement was seven years before presentation. She neither drank alcoholic beverages nor smoked cigarette. She had earlier been taken by her brother to a hospital in town where she had some investigations done, including an abdominal CT scan and booked for surgery but was discouraged by her spiritual healers who claimed that her illness was due to a spiritual attack and could only be cured by prayer and fasting but not surgery which will result to her death. Her strong spiritual inclination annoyed her brother and lead to her abandonment. She was brought to this hospital when she could no longer lie down, stand or walk and was deserted by the spiritual healers who feared she might die.

On physical examination, she was severely malnourished with significant loss of muscle mass, very pale, dyspnoeic, afebrile to touch, anicteric and with bilateral pitting pedal oedema. Her pulse rate was 116 beats per minute, blood pressure was 100/70mmHg, jugular venous pressure was raised and apex beat at the 5^{th} left intercostal space in the mid clavicular line. Her heart sounds were I and II only. Her abdomen was markedly distended, and there was visible collateral venous circulation (Fig. 1). On abdominal palpation, it was tense and the internal organs could not be palpated but there was no sign of peritoneal irritation. Her abdominal girth was 114 cm.

She had a positive fluid thrill but shifting dullness sign could not be elicited since she could not be placed in the supine position because of severe dyspnoea. The bowel sounds were present. Her arterial oxygen saturation was 44% and respiratory rate 40/min. She was admitted and nursed in the sitting position (she could not lie in the cardiac position) and placed on Oxygen by nasal prongs at a rate of 6 liters/minute.

Fig. 1. Patient's abdomen: gross abdominal distension with visible collateral venous circulation



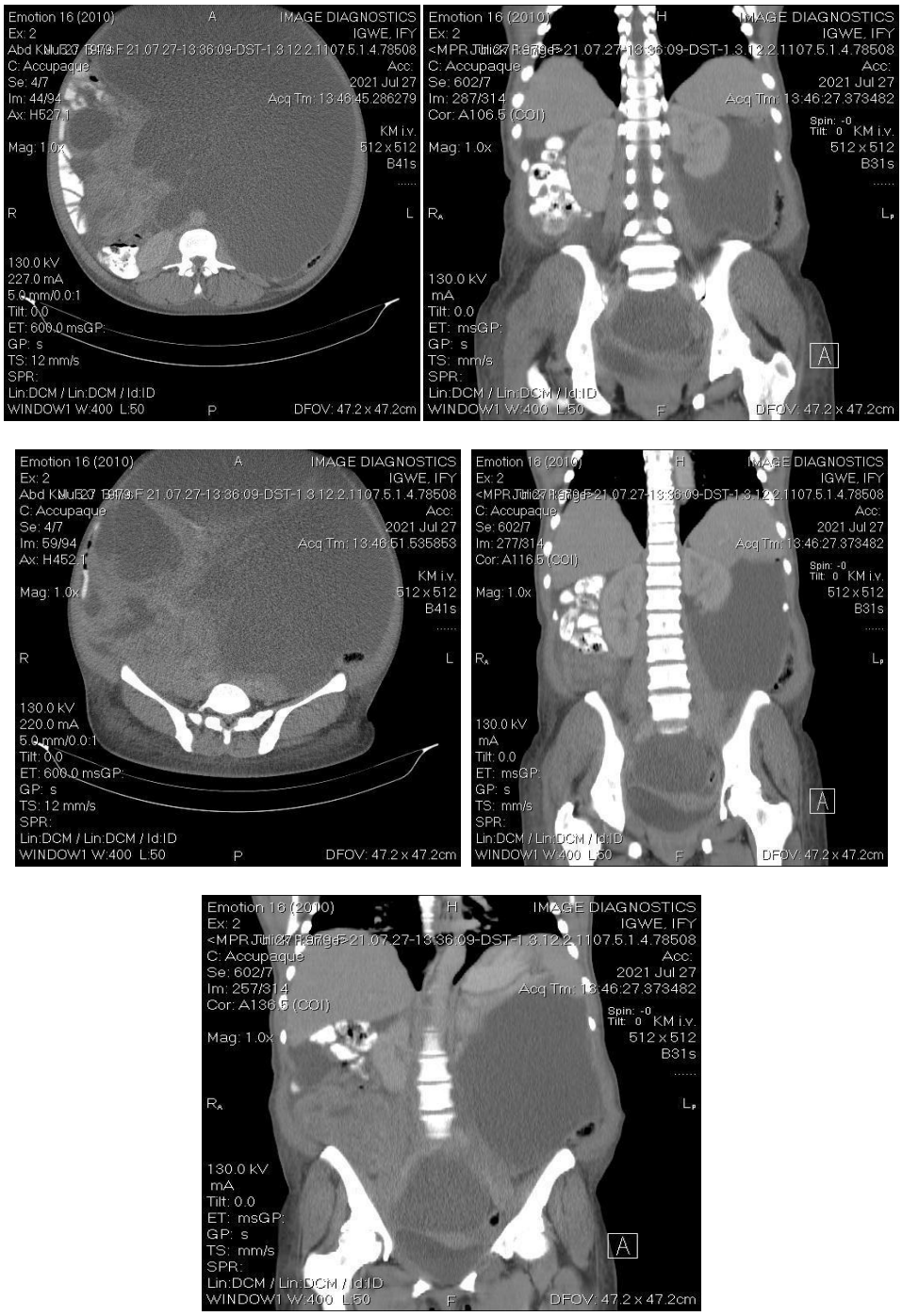


Fig. 2. Abdominal CT showing a voluminous cystic lesion causing a displacement and compression of the bowel loops in the right upper abdomen

Her blood sample was taken for investigations and the results revealed a microcytic anaemia (PCV 19%) with a normal serum electrolytes, creatinine, urea and negative viral serology (HIV, HBV and HCV). Urinalysis was normal. Urethral catheter was passed to monitor urinary output. The abdominal CT scan report which was done earlier was, “A large cystic mass arising from the left adnexa into the abdomen. It is multiloculated with a very large single cavity on the left and a solid enhancing area on the right lumbar region as well as thick internal septae. The solid component is heterogenous and also has locules of cysts within it. It extends from the epigastrium to the pelvis and pouch of Douglas and from anteriorly to the spine in some parts. The mass in

its entirety measures about 33.3cmx33.5cmx31.3 cm. The bowel loops are displaced to the right and compressed by the mass. The uterus is normal in outline. No normal ovarian tissue seen. Impression: bilateral complex cystic ovarian masses ." The final diagnoses were ovarian cyst and anaemic heart failure.

Her spiritual belief was addressed and she was educated on her condition and lines of management. She was placed on furosemide and spironolactone and transfused with four units of packed red blood cells over a period of two days. Her post transfusion PCV was 30%. She was referred to a tertiary hospital but she declined on account of cost and no reliable caregiver. She was therefore evaluated for exploratory laparatomy. In the theatre, positioning her in the supine position was a challenge to the anaesthetist since there was no equipment for intubation in the rural hospital. She was therefore given an epidural anaesthesia blocking up to the level of the xiphisternum but in the sitting position. Her back was supported by many pillows and a laparatomy incision made from the xiphisternum to the suprapubic area. A cystic mass was found with adhesions to the anterior abdominal wall. Attempts to free it from the anterior abdominal wall resulted in the rupture of the cyst and about 55 liters of serous fluid was drained. As the fluid was draining, the pillows supporting her back were removed one after the other until she could be placed supine on the operating table. The origin of the cyst was traced to the mesentery of the ileum. Consequently, resection of the mesenteric cyst and adjoining ileum was done. An ileal end-to-end anastomosis was performed. The uterus and adnexal structures were free. Due to a blood loss of approximately 2500 mL and hemodynamic instability, she had intraoperative blood transfusion and infusion of vasopressors.

Her immediate post-surgical evaluation was inadequate. Her PaO_2 remained between 50 and 60%. This gradually improved with oxygen administration and she was gradually weaned off oxygen when the PaO_2 increased to 98% after 5 days. She was discharged 10 days after the surgical procedure.

She was advised on adequate nutrition considering her loss of weight. An outpatient post-surgical follow-up was performed one month later, and her condition was normal. The histopathology study of the sample reported a benign mesenteric cyst.

3. DISCUSSION

"Giant intra-abdominal cysts have become comparatively rare because of advances in healthcare systems" [7]. "Mesenteric cysts in particular have a low global incidence of approximately 1 out of 100 000 adults seeking medical care, and they primarily affect people in their second to third decades of life with a male-to-female ratio of 2:1" [6]. Mesenteric cysts represent 7 % of all abdominal cysts and can

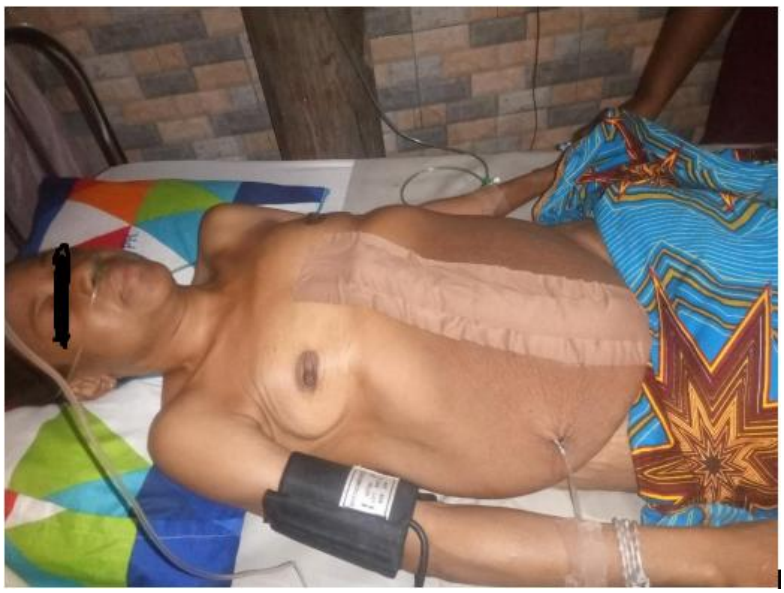


Fig. 3. Immediate post operative period of the patient

affect any part of the mesentery [8]. “The diagnosis of mesenteric cysts is difficult to achieve, as it commonly mimics other conditions such as ovarian cyst, pseudocyst of the pancrease and aortic aneurysms” [9]. Although imaging studies such as ultrasound scan, CT scan and MRI are important for the diagnosis and accurately locating the cyst as well as its interaction with other neighboring structures, it can occasionally be misleading since their diagnostic accuracy is dependent on the experience and expertise of the interpreter as in the index case [10]. “A definitive diagnosis is established through exploratory laparotomy, surgical excision and histopathological examination of the mass. All these considerations were taken into account in the management of this patient. Surgical resection of the cystic mass by laparotomy or laparoscopy is the mainstay of treatment to prevent recurrence and malignant transformation” [11]. Although the laparoscopic approach has many advantages which include; reduction of postoperative pain, shortening of the length of hospital stay, and improving recovery rates, it was not available and if available cannot be used due to the size of the mass.

Some of the challenges of rural practice are brought to the fore in this patient. They include:

1. The activities of her spiritual healers and spirituality of the patients.

Spiritual beliefs have been reported by some authors to affect health care decision making and health care outcomes including the quality of life [12,13]. It also can create distress and increase the burden of illness [14,15,16]. Some of these effects were observed in this patient. She reported to the hospital as a last resort after she was abandoned by her frightened spiritual healers. The rural family physician being decision maker, care provider, communicator and community leader [17] has a big role to play in limiting the excesses of spiritual healers. “The physician, by addressing spiritual issues of patients and loved ones, can create more holistic and compassionate systems of care” [18].

2. Poverty is prevalent among rural dwellers. This patient was brought to the hospital in a wheelbarrow because of her inability to walk through a difficult terrain not accessible by motor vehicles. Living in such an environment predisposed her to engage spiritual healers who leave among them and charge no fees since they believe that they are working for God and depend a lot on donations.

3. In rural practice, ingenuity and appropriate technology occasionally plays a big role to meet the health demands of the people. The performance of surgery on this patient was challenging due to non availability of appropriate equipment for intubation and assisted ventillation. The laparotomy was commenced with the patient in the sitting position under epidural anaesthesia and gradually brought to the supine position when the splinting of the diaphragm eased as the fluid was suctioned out of the abdominal cavity.

4. CONCLUSIONS

Mesenteric cyst is a rare and mostly benign condition, with nonspecific clinical presentation and delayed diagnosis. Its diagnostic and characterization process is based on radiological studies, ranging from ultrasound to magnetic resonance imaging. The treatment of choice is surgical, thus avoiding recurrences. In this case, imaging studies revealed ovarian mass but at laparotomy, a mesenteric cyst was found. The cyst and adjourning ileum were resected. The patient had a favorable post-operative course with no complications related to the procedure. The spiritual beliefs of the patient was addressed before the surgery.

CONSENT AND ETHICAL APPROVAL

Permission was obtained from the patient and the Bethesda Family Hospital authority before this case report was published.

ACKNOWLEDGEMENTS

We would like to thank all the co-authors for working on this patient, contributing with their knowledge and support in favor of the patient.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. De Perrot M, Bründler M, Tötsch M, Mentha G, Morel P. Mesenteric cysts. Toward less confusion? Dig Surg. 2000;17(4):323-8. Available:https://doi.org/10.1159/000018872

2. Paramythiotis D, Bangeas P, Karakatsanis A, Iliadis A, Karayannopoulou G, Michalopoulos A. Ideal treatment strategy for chylous mesenteric cyst- a case report. J. Med. Case Rep. 2018;12(1). DOI: 10.1186/s13256-018-1716-x
3. Saviano MS, Fundarò S, Gelmini R, Begossi G, Perrone S, Farinetti A, Criscuolo M. Mesenteric cystic neoformation: Report of two cases. Surg Today. 1999;29(2):174–177.
4. Spolianski G, Kopelman D, Kimmel B, Hatoum OA. Laparoscopic exploration and treatment for a mesenteric cyst lymphangioma in adults. ANZ J Surg. 2019;89(10):1334-1336.
5. Pithawa AK, Bansal AS, Kochar SP. Mesenteric cyst: A rare intra-abdominal tumour. Med J Armed Forces India. 2014;70(1):79-82.
6. Ünlüer EE, Ünlüer S, Şahı N Y, Kamer KE, Karagöz A, Tan GC. An uncommon cause of abdominal pain: Mesenteric cyst. Interv Med Appl Sci. 2016;8(1):23-25.
7. Paramythiotis D, Bangeas P, Karakatsanis A, Iliadis A, Karayannopoulou G, Michalopoulos A. Ideal treatment strategy for chylous mesenteric cyst: A case report. J Med Case Rep. 2018;12(1):317.
8. Oh C, Danese CA, Dreiling DA. Chylous cysts of mesentery. Arch Surg. 1967;94(6): 790-3.
9. Lee DL, Madhuvrata P, Reed MW, Balasubramanian SP. Chylous mesenteric cyst: A diagnostic dilemma. Asian J Surg. 2016;39(3):182-6.
10. Alborzi S, Rasekhi A, Shomali Z, Madadi G, Alborzi M, Kazemi M, et al. Diagnostic accuracy of magnetic resonance imaging, transvaginal, and transrectal ultrasonography in deep infiltrating endometriosis. Medicine (Baltimore). 2018; 97(8):e9536.
11. Tan JJ, Tan KK, Chew SP. Mesenteric cysts: An institution experience over 14 years and review of literature. World J Surg. 2009;33(9):1961-5.
12. Kisenyi RN, Muliira JK, Ayebare E. Religiosity and adherence to antiretroviral therapy among patients attending a public hospital-based HIV/ AIDS clinic in Uganda. J Relig Health. 2013;52(1):307-17.
13. Parsons SK, Cruise PL, Davenport WM, Jones V. Religious beliefs, practices and treatment adherence among individuals with HIV in the southern United States. AIDS Patient Care STDS. 2006;20(2):97-111.
14. Vyas KJ, Limneos J, Qin H, Mathews WC. Assessing baseline religious practices and beliefs to predict adherence to highly active antiretroviral therapy among HIV-infected persons. AIDS Care. 2014;26(8): 983-87.
15. Daniel O, Oladapo O, Ogundahunsi O, Ogundahunsi S, Ogun S, et al. Default from anti-retroviral treatment programme in Sagamu, Nigeria. Afr J Biomed Res. 2008; 11(2):221-24.
16. Lyon ME, Garvie PA, Kao E, Briggs L, He J, et al. Spirituality in HIV-infected adolescents and their families: FAmily CEntered (FACE) advance care planning and medication adherence. J Adolesc Health. 2011;48(6):633-36.
17. Caulfield A, Plymoth A, Nartey YA, Mölsted-Alvesson H. The 6-star doctor? Physicians' communication of poor prognosis to patients and their families in Cape Coast, Ghana. BMJ Glob Health. 2020;5(6):e002334. DOI: 10.1136/bmjgh-2020-002334
18. Sajja A, Puchalski C. Training physicians as healers. AMA J Ethics. 2018;20(7): E655-663. DOI: 10.1001/amaj ethics.2018.665

Peer-review history:
The peer review history for this paper can be accessed here:
https://www.sdiarticle5.com/review-history/97436