Large mesenteric cyst

Manuel Alexandre Viana Ferreira, Cristina Monteiro, Conceição Monteiro, Alberto Midões

ABSTRACT

Introduction: Mesenteric cysts are rare benign lesions. They usually remain asymptomatic and in most cases are incidentally discovered. However, they can reach large dimensions conditioning pain, abdominal distension or sensation of an abdominal mass. The definitive diagnosis is often made during surgery that should involve total removal of the lesion. Knowledge of these lesions is important because of the existence of complications associated with ineffective surgery. This paper reports the surgical treatment of a large mesenteric cyst. Case Report: We report a 20-year-old male with an history of abdominal distension without pain, nausea or vomits. The image examinations revealed a large cystic mass involving the entire abdominopelvic cavity. The patient underwent an exploratory laparotomy and the cyst was excised. The histological examination revealed a serous cyst 33 cm in diameter, without evidence of malignancy. Conclusion: Mesenteric cysts are uncommon lesions that can present asymptomatically or with nonspecific symptoms. Complete resection of the cyst could be challenge but is still the best therapy.

INTRODUCTION

Mesenteric cysts are rare tumours, with an incidence of 1/100,000 – 1/250,000 [1] and large mesenteric cysts are even less common [2]. The biggest review of case reports found these cysts in the range of 2–36 cm, with 60% associated with the small bowel mesentery, 24% with large bowel and 16% in the retroperitoneum. It affects women as much as men, with a mean age of 25 years [3]. Mesenteric cysts are lined by a single layer of columnar or cuboidal epithelial cells. They may be filled with serous, chylous, sanguineous or chylolymphatic fluid [4]. The diagnosis and treatment of mesenteric cysts is challenging due to the low incidence, lack of specific symptoms and variability in location and size. This report presents the case of a large mesenteric cyst with an uncommon clinical presentation and discuss the current treatment.

CASE REPORT

A 20-year-old male, presented a history of abdominal distension during the last two years that, despite diet and vigorous exercise, was unable to reduce his abdominal perimeter (Figure 1). The X-ray and Computed tomography (CT) scan revealed a large cystic mass measuring 22x26cm, involving the
entire abdominopelvic cavity (Figure 2). The patient underwent an exploratory laparotomy. A cystic lesion was found, with more than 30 cm in diameter, occupying almost completely, the whole abdominal cavity, composed by an external smooth serous wall. Lysis of adhesions present on the right and transverse colon and on the mesocolon, were performed with sequential hemostasis. The pedicle of the cyst, located at the level of the mesenteric root, was sectioned and the visceral peritoneum sutured with vicryl 2-0s (Figure 3). The cyst was completely excised without breaking the capsule. The histological examination revealed a unilocular cystic formation with 33 cm in diameter, covered by a layer of serous-type flat cells without atypia and thin fibrous wall with focal hemorrhage, fibrin and discrete infiltrate, surrounded by adipose tissue. After 6 months, the patient had no evidence of recurrence.

DISCUSSION

Although the first description of a mesenteric cyst was made in 1507 by Benevieni, in the autopsy of a 7-year-old boy [5], the first accurate description was only published in 1842 by Rokitansky [1] and, in 1880, Tilaux was the first to perform a successful surgery [6].

A mesenteric cyst is defined as a cyst located in the mesentery, which has a recognizable lining of endothelial or mesothelial cells. It can occur anywhere in the mesentery. The aetiology of mesenteric cysts is still subject to debate, however the most accepted theory, proposed by Gross, is that they can result from a benign proliferation of ectopic lymphatic tissue that lacks communication with the remainder of the lymphatic system [4]. The most accepted classification was elaborated upon by Beahrs et al. in 1955 [7], in which the cysts are organized into four groups; developmental, traumatic, infectious, and neoplastic.

The clinical presentation of the cysts is variable. They are often asymptomatic and found incidentally [4]. Some patients may present with unspecified abdominal pain (55–82%), sensation of abdominal mass (54–61%), or abdominal distension (17–61%) [8–10]. An abdominal mass, like the one described in our report, may be detected on physical examination in 61% of patients [11].

A complete history and physical examination are essential. Careful interpretation of imaging is important for preoperative planning. X-ray and ultrasound (US) can be useful as primary imaging modalities. US often reveals a hypoechoic cystic mass with or without intense echoes [4]. CT scan can provide the diagnosis in some situations. It allows for the determination of size, origin of the mass, and the relation to the neighbouring organs [4].

Treatment is indicated in symptomatic patients [12]. While there is a lack of evidence correlating size with complications, it is likely that increasing size will increase the risk of complications [12]. Complete excision by laparoscopic or open technique is considered the gold standard to prevent recurrence or malignant transformation, which could occur in 3% of cases [13].
While follow-up periods using ultrasound imaging range from 3 to 48 months in the literature, there appears to be minimal benefit in long-term follow-up as recurrence is rare and generally occurs early [14].

CONCLUSION

Mesenteric cysts are rare tumours, and large mesenteric cysts are even less common. The diagnosis is challenging due to the low incidence and lack of specific symptoms. Treatment is indicated in symptomatic patients and complete excision, usually performed by laparotomy, is considered the gold standard to prevent recurrence or malignant transformation.

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Author Contributions

Manuel Alexandre Viana Ferreira – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published
Cristina Monteiro – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published
Conceição Monteiro – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published
Alberto Midões – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Guarantor of Submission

The corresponding author is the guarantor of submission.

Source of Support

None.

Consent Statement

Written informed consent was obtained from the patient for publication of this case report.

Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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