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Mesenteric Cyst of Mesothelial Origin in Young Women: Literature Review and Case Report

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ABSTRACT

Introduction: The mesenteric cyst is a rare type of abdominal tumor in the adult and pediatric population[1], the mesothelial cysts are more frequent in young women [2,3], there are mainly 3 forms of clinical presentation[4]. The asymptomatic clinical presentation is the most frequent and is diagnosed incidentally in complementary tests or surgeries[5].

Clinical case: A 38-year-old woman diagnosed with a mesocolon-dependent mesenteric cyst of mesothelial origin at the splenic angle level, the triphasic abdominopelvic CT scan reported an 11x11 cm cyst with a volume of 403 cc, the biopsy reported a simple mesothelial cyst. Complete removal of the tumor was performed using a laparoscopic approach.

Conclusion: The treatment of choice for tumors of the mesentery is the complete removal of the tumor, the mere aspiration of its contents or partial resection is doomed to recurrence [6].

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INTRODUCTION

Mesenteric cysts are rare intra-abdominal lesions. They represent approximately 1 in 100,000 hospital admissions in adults and 1 in 20,000 in children. They are located at any point of the mesentery, from the duodenum to the rectum, the most frequent location is the mesentery of the small intestine [1,2,3].

There is no clear evidence of its etiology, so congenital, neoplastic, acquired, and idiopathic causes have been attributed to it [4]. The most recent classification is based on its origin based on the results histological and immunohistochemical: mesothelial, lymphatic, enteric, urogenital, dermoid or pseudocyst [5,6]. The most frequent clinical presentation is the asymptomatic form, diagnosed incidentally in complementary tests or surgery. The indolent form predominates in adults and the most frequent symptoms are abdominal pain in the 80% of the cases, distension and abdominal mass (30-50%)[7,8]. Surgical Removal is considered the gold standard procedure and minimally invasive surgery is the approach of choice [9,10].

CLINICAL CASE

A 38-year-old woman, salesperson, with a significant surgical history of conventional emergency cholecystectomy for acute cholecystitis 5 years ago with subsequent exploratory laparotomy one month later secondary to the presence of bile peritoneum with detection of a mesenteric cyst, which is left to evolve freely. He denies chronic diseases and allergies, smoking and occasional alcoholism.

She refers that it began 5 years ago with the presence of an abdominal tumor of less than 1 cm that was visualized during the surgical procedure, which was left to evolve freely, later with an increase in size, she went for evaluation by digestive and endocrine surgery where they performed a CT scan triphasic abdominopelvic cyst (image 1) reporting a cyst at the level of the tail of the pancreas with a volume of 403 cc (image 2).

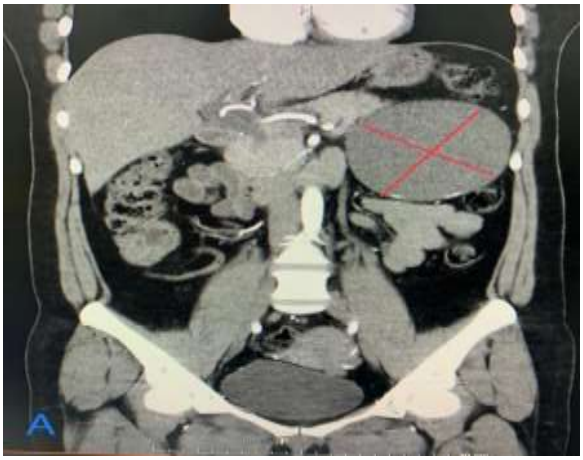
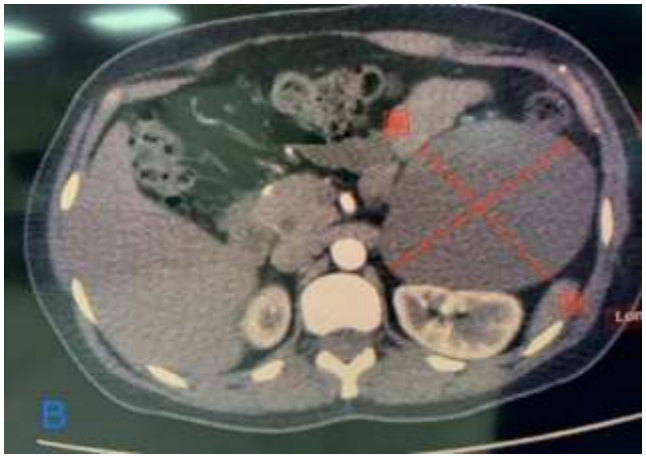


Image 1. A) Simple abdominal tomography, coronal



B) CT axial cut. Red lines indicate tumor.

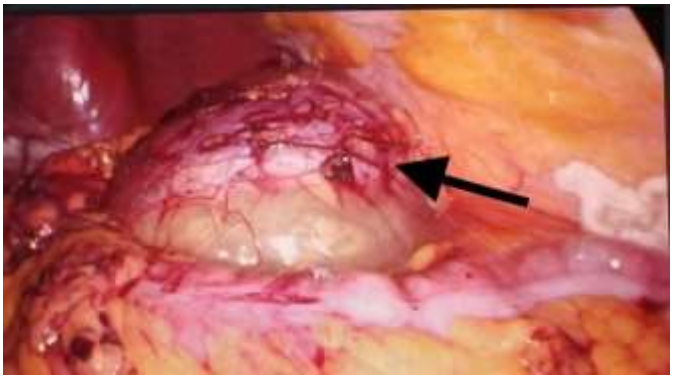


Image 2. mesenteric cyst 403 cc

Image 3. Mesocolon-dependent cyst

Surgical technique

The surgical approach was laparoscopic, under balanced general anesthesia, the port placement site was infiltrated with bupivacaine, pneumoperitoneum was established with the Hasson technique by umbilical incision and it was placed through that 10 mm half port, a subcostal 10 mm port was placed left in the midclavicular line, one of 5 mm in the right subcostal midclavicular line and one of 5 mm in the left subcostal in the anterior axillary line, the cavity was explored, a cyst dependent on the transverse mesocolon of 11x11 cm was detected at the level of the splenic angle of the colon (image 3). The cyst is dissected circumferentially through the supramesocolic route, separating adjacent structures: transverse colon, pancreas, spleen, and left kidney. The content is punctured and suctioned, obtaining serous fluid. The cyst is sectioned from its root at the level of the mesentery, respecting its vessels (image 4). The cyst was extracted in an endobag through a 10-mm port and sent for pathological study, which reported a simple mesothelial cyst. Hemostasis is confirmed, ports are removed under direct vision and closed by planes.

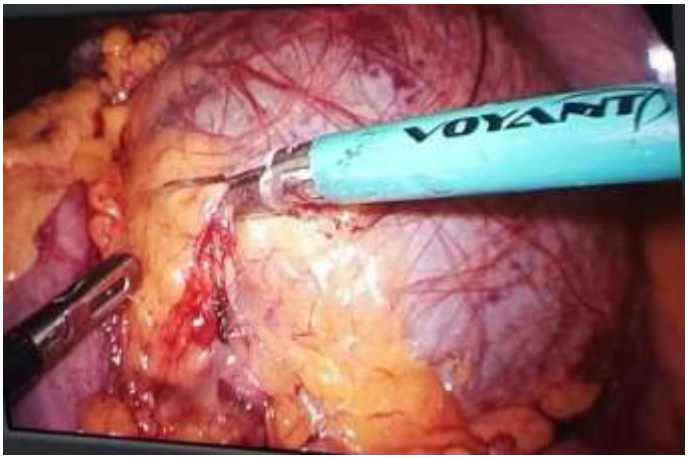


Image 4. Serous mesenteric cyst dissection

She was discharged three days after the surgery, without complications during her hospital stay, currently being monitored by her referral hospital. The histopathological report describes, the surgical finding was a mesocolon-dependent cyst measuring 11x11 cm at the level of the splenic angle of the colon with serous content that did not infiltrate structures.

DISCUSSION

We present the case of a mesothelial mesenteric cyst in a young woman that was incidentally diagnosed by a previous surgical procedure, the growth of the cyst was 10 cm over 5 years, the cause of the growth is unknown, as has been

reported in the literature in which even the cause of tumor growth is not clear [6].

The mesenteric cyst is a tumor of multiple origins that surely occurs more frequently than reported in the literature, therefore it is underdiagnosed, the male:female ratio is 1:1, however, it continues to be a rare entity [7]. Agree According to the literature, the mesenteric cyst of mesothelial origin is the most frequent in young women [8]. Due to the lack of characteristic signs and symptoms, the diagnosis is made when these lesions reach a sufficient size to be palpable, or when they compress adjacent organs and structures [9]. The most frequent way of diagnosis of a mesenteric cyst is incidentally in surgical procedures [10]. They can present with chronic manifestations such as diffuse and poorly defined abdominal pain, associated with a palpable mass, due to cyst complication or compression of adjacent structures. the diagnosis is confirmed with imaging studies such as the different modalities of ultrasound, computed tomography and magnetic resonance, the typical image in the tomography is the "swirl sign"[11]. The differential diagnosis must be made with other intra-abdominal or retroperitoneal tumors [12]. These tumors are generally of benign origin, however, 3% of mesenteric cysts evolve into malignant cysts [13]. The optimal treatment is the removal of the cyst, and sometimes it is necessary to sacrifice the adjacent organ due to the impossibility of its enucleation, its marsupialization or drainage into the peritoneal cavity has a high frequency of recurrence and infection, surgical treatment can be performed under the modality of minimally invasive surgery [14].

Until now it has not been possible to clarify the etiopathogenesis of these tumors, however, the following hypotheses are available: a) rupture of lymphatic vessels with extravasation of lymph and formation of granulation tissue, b) abnormal location of lymphatic tissue without pathway drainage, c) failure in the fusion of the sheets of the mesentery during its development, d) secondary to abdominal trauma and e) due to lymphatic degeneration. According to the biopsy report, a cyst of mesothelial origin was found, the percentage of incidence of which has not yet been reported, however, it is within the current classification proposed by Perrot et al [15].

The objective of this review and case report is to make fellow surgeons aware that this condition should be considered in the differential diagnosis of abdominal tumors, since being infrequent, it is underdiagnosed, leading the patient to a higher incidence of morbidity and consequent increase in surgical complications when removing it late and not electively [16].

CONCLUSION

The treatment of choice for tumors of the mesentery is the complete removal of the tumor, since this determines a better prognosis in patient survival, the mere aspiration of its contents or partial resection is doomed to recurrence.

CONFLICT OF INTERESTS

The authors declare that they have no conflict of interest.

Ethical Responsibilities

Protection of people and animals. The authors declare that no experiments were carried out on humans or animals for this research. Data confidentiality. The authors declare that they have followed the protocols of their work center regarding the publication of patient data. Right to privacy and informed consent. The authors have obtained the informed consent of the patients and/or subjects referred to in the article. This document is in the possession of the corresponding author.

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