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Giant Mesenteric Cyst of The Large Bowel: Case Report

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ABSTRACT

Introduction: Mesenteric cysts are rare, benign intra-abdominal cystic lesions that arise from the mesentery, the tissue fold attaching the intestines to the abdominal wall. They can develop from the duodenum to the rectum. Mesenteric cysts have various histological origins, with lymphangiomas being more common in children and mesothelial cysts in young to middle-aged women. While they can remain asymptomatic, they may also cause complications such as intestinal obstruction or perforation. Complete resection is the preferred treatment due to its lower recurrence rate.

Case Presentation: A 48-year-old female with a medical history of systemic arterial hypertension, allergies, hysterectomy, appendectomy, cesarean section, right axillary lipoma resection, and a cyst in the left zygomatic region, presented in June 2021 with dull, constant pelvic pain. Over time, her symptoms progressed to include volume increase, fatigue upon sitting, constipation, and hand tremors. Imaging studies revealed a large cystic lesion extending from the left ovary. In January 2024, an abdominal ultrasound showed a complex ovarian cyst (O-RADS 4). Surgical exploration revealed a mesenteric cyst associated with the sigmoid colon, which was resected along with a distal segment of the descending and sigmoid colon, preserving the left colic artery. The patient recovered well postoperatively, with proper colostomy function.

Discussion: Mesenteric cysts are benign tumors that can occur throughout the gastrointestinal tract, most commonly in the small bowel mesentery. Their clinical presentation can range from asymptomatic to acute abdominal pain secondary to complications such as intestinal obstruction or cyst rupture. Diagnostic imaging typically involves ultrasound, CT, and MRI. Surgical resection is the treatment of choice to prevent recurrence. The prognosis following complete cyst excision is favorable, with no reported recurrences.

Conclusion: Mesenteric cysts present a diagnostic challenge due to their wide range of symptoms. The recommended treatment, as supported by literature, is complete resection to minimize recurrence. Our case followed this approach, and the patient showed a positive clinical outcome.

ARTICLE DETAILS

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INTRODUCTION

a mesenteric cyst is a rare intra-abdominal cystic lesion that arises from the mesentery, which is the fold of tissue that attaches the intestines to the posterior abdominal wall. This type of tumor follows all the mesentery and can develop from the duodenum to the rectum (I).

Mesenteric cysts have different histological origin, the most common type among children are lymphangiomas with a more acute way of presentation, and mesothelial cyst among

young and middle-aged women, being this type asymptomatic (V).

The clinical presentation can be from a asymptomatic and insidious found, towards a acute abdomen secondary to its complications being intestinal occlusion to perforation of the same mesenteric cyst (VII)

The complete resection is the preferred type of treatment because of its lower recurrence, in comparison of marsupialization or drainage of the mesenteric cyst (XII)

CASE PRESENTATION

This is a 48-year-old female patient with significant medical history including systemic arterial hypertension, allergy to penicillin, aspirin, and acetylsalicylic acid, hysterectomy 11 years ago, appendectomy 13 years ago, cesarean section 22 years ago, right axillary lipoma resection (evolution time not specified), and a cyst in the left zygomatic region (evolution time not specified).

The patient began experiencing symptoms in June 2021, with constant pelvic pain of a dull type, which did not cause other symptoms. Over time, the pain was associated with a progressive increase in volume, fatigue upon sitting, changes in bowel habits toward constipation, and hand tremors.

In September 2023, an abdominal ultrasound was performed, which revealed an ovoid cystic tumor with smooth margins and homogeneous characteristics, located in the left hypochondrium extending to the mesogastrium, with non-measurable dimensions. For this reason, a non-contrast and contrast-enhanced abdominal CT (image 1) scan was requested in September 2023, which identified a large cystic lesion (6,667 cubic centimeters) appearing from the left ovarium with loss of the interface with the right ovary, which was solid and heterogeneous.

The patient continued follow-up with the obstetrics and gynecology department, and in January 2024, a new abdominal ultrasound was performed, reporting a complex ovarian cyst on the right side (O RADS 4). The patient was scheduled for surgery, and the procedure was carried out. However, during the approach, the left ovary was found to be adherent but not dependent on the tumor, and general surgery support was requested.

During the surgical approach, a mesenteric cyst of the sigmoid colon was identified, leading to dissection of intestinal adhesions and the Toldt's fascia. Subsequently, a resection of the distal segment of the descending colon and sigmoid colon was performed, preserving the left colic artery, with the creation of a left colostomy.

A mesenteric tumor dependent on the sigmoid colon was found, measuring approximately 40x30x18 cm (image 2), with citrine liquid content, and was sent to the pathology department. During the postoperative stay, 12 hours post-surgery, the patient presented adequate peristalsis, tolerated oral intake well, and the colostomy functioned properly.

se trata de paciente femenina de 48 años con antecedentes de importancia de hipertensión arterial sistémica, alergia a penicilina, aspirina, ácido acetilsalicílico, histerectomía hace 11 años, apendicectomía hace 13 años, cesárea hace 22 años, resección de lipoma en área axilar derecha (no refiere tiempo de evolución) y quiste en región cigomática izquierda (no refiere tiempo de evolución).

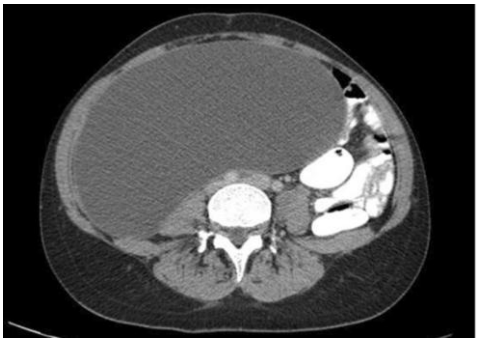

Image 1: Contrast-enhanced tomography revealing the presence of a tumor in the abdominal cavity.

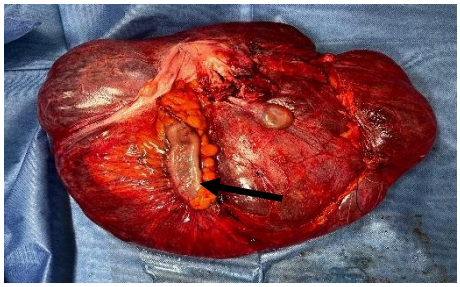

Image 2: Mesenteric cyst of the sigmoid colon measuring approximately 40x30x18 cm with serous content (black arrow indicating resected intestine).

DISCUSSION

Mesenteric cyst can be defined as a heterogeneous group of lesions that have an origin at the mesentery or the greater omentum that may be found in any portion of the gastrointestinal tract from the duodenum to the rectum (I).

They are benign intra-abdominal tumors with an incidence of 1 case per 250,000 hospital admission (II), although, in other

literature we can found the incidence of 1 per 100,000 adults and 1 per 20,000 children (III), and mesenteric cyst are more commonly seen in males than females (IV). The first time that was reported was from an autopsy of an 8-year-old boy by an Italian anatomist Benevieni in 1507, after, in 1800 Tillaux made de first surgery resection in this type of lesions (III).

Many authors consider mesenteric, omental, an retroperitoneal cyst as one group because they derive from the same embryological structures (V). Although a few mesenteric cysts are well defined, controversy still exists about the etiology and classification of most these cysts. Lately, electron-microscopic findings brought new elements in the identification of endothelial and mesothelial cells, and two further groups of mesenteric cysts emerged namely those of vascular/lymphatic origin such as simple lymphatic cysts and lymphangiomas, and those of mesothelial origin such as simple mesothelial cyst, benign cystic mesotheliomas, and malignant cystic mesotheliomas (V)

While the lymphatic simple cysts and the mesothelial simple cyst frequently remain asymptomatic, the lymphangiomas cyst and mesotheliomas cyst can show more aggressivity and invasive behavior (VI).

The etiology is unclear, but the most accepted describes a benign proliferation of ectopic mesenteric lymphatic tissue failing to communicate with the core lymphatic system (IX)

The mesenteric cyst can be found in 60% in the small bowel mesentery, 24% in the large bowel mesentery, and 14.5% in the retroperitoneum (VIII).

The clinical presentation of mesenteric cysts is extremely varied and is dependent on numerous factors: the size of the cyst, its location, and the presence or absence of complications. In general, patients can present in one of thee ways: (1) asymptomatic: these patients are picked up incidentally on routine physical examinations, during abdominal surgery, or routine imaging, approximately 40-45% of patients present this way; (2) nonspecific abdominal complaints: which include pain and distension, occasionally associated with nausea and vomiting, diarrhea, constipation, and loss of weight; (3) acute abdomen: due to complications of the cyst and can occur in approximately one-third of patients. Some of these complications include intestinal obstruction, volvulus, hemorrhage, infection or cyst rupture (VII).

Imaging diagnostic modalities varies between USG, CT scan and MRI, but USG and CT scan tend to be the favored methods. An abdominal USG shows a hypoechoic cystic mass with or without intense echoes and can also show septa, debris, abdominal fluids levels. The CT scan reveals more details like determining the size, sometimes the origin and the location of the organs around the cyst. MRI gives us more information and describes in a better way deh mass and soft tissue (X).

The treatment of choice for mesenteric cyst is surgery. Aspiration and marsupialization are nor recommended because they are associated with high recurrence and infection rate. Localized resection of the intestine or surrounding structures may be required to excise the cyst in bloc. Laparoscopy may be feasible for cyst removal, and result in less postoperative pain, a shorter hospital stay, and earlier return to normal activity and work (XII)

Mesenteric cysts have good prognosis, and no recurrence haven reported following complete excision of the cyst. Hence, laparoscopic cyst removal is the preferred approach and can be done without any complications in properly selected patients (XI).

CONCLUSION

A mesentery cyst is a rare type of tumor that can be found in a wide range of patients and has from a asymptomatic course to a acute abdomen secondary of its complications, and difficult diagnosis because variety of symptoms and need to have a very high suspicion of the disease. In the multiple articles reviewed, the recommended treatment is the complete resection of the tumor secondary of its high recurrence rate if not. In our case, we followed what the literature says, and the patient had a good evolution of the case.

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