

Non-Specific Perforated Mesenteric Cyst in a Patient with Ulcerative Colitis - A Diagnostic Challenge in the Emergency Setting

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Abstract

Mesenteric cysts are rare lesions with low malignancy potential. The incidence that is less than 1 in 100,000 patients. We present a clinical case of a patient with intense abdominal pain who presents in our Emergency Unit. The medical history of the patient revealed an ulcerative colitis. The abdominal Computed tomography revealed a perforated mesenteric cyst. This diagnostic is unusual in emergency setting and we were not able to identify an correlation with ulcerative colitis. Surgical approach with complete excision of the cyst is the treatment of choice.

Keywords: Mesenteric Cysts; Swelling; Abdominal Pain

Introduction

Mesenteric cysts have an incidence that is less than 1 in 100,000 patients. The first description was in 1507 as an autopsy finding and less than 1000 have been described in the literature [1]. They are more common found in women than men, with a 1:2 ratio [2]. The localisation is commonly in the mesentery of the ileum; uncommon sites are the mesocolon and the mesentery of the jejunum. Approximately 50% are asymptomatic.

We present a clinical case of a patient with intense abdominal pain who presents a perforated mesenteric cyst that was resected with the adjacent small bowel.

Case Presentation

A 64 years old male was admitted to the emergency unit of our hospital with abdominal pain on the left iliac fossa and on hypogastric region, lack of appetite for 2 weeks. The medical history found ulcerative colitis treated with Pentasa in remission period and not under treatment actually. On arrival, his vital signs were 37.9°C, 75 bpm and 125/75 mmHg, O2 saturation 99%. The physical exam revealed generalized abdominal sensibility with abdominal guarding and sensation of abdominal mass on the left iliac fossa and hypogastric region. The Giordano sign was found negative on the right side. The cardio-respiratory exam revealed no anomalies. Laboratory data showed leucocytosis 10,200/mm³ (normal 3.70-9.50×10³/mm³) and C-reactive protein 154 (normal < 5.00 mg/dl). The rest was normal. The abdominal Computed tomography found a mesenteric cyst of approximately 9X6 cm in the right iliac fossa,

of oval shape with a heterogeneous content with a discontinuity in the wall of the mass which seems to spread downwards until it comes into contact with the sigmoid in the lower right part of the lesion (Figure 1, 2). The diagnosis was of a perforated mesenteric cyst.



Figure 1: Axial abdominal CT scan who reveal a perforation on the inferior part of the mesenteric cyst.

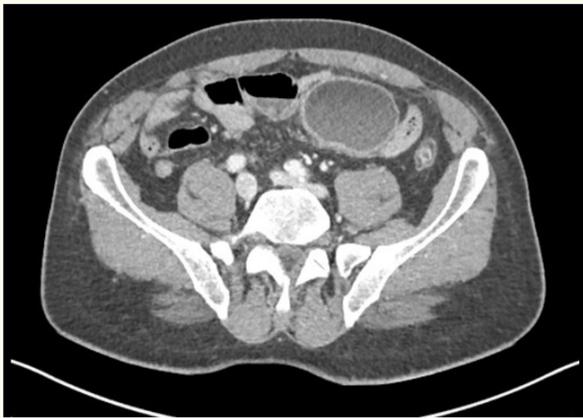


Figure 2: Coronal abdominal CT scan who reveal the close contact between the bowel loop and the mesenteric cyst.

A surgical exploration by laparotomy in emergency revealed an oval cyst with regular wall who presented a perforation that was described on the preoperative imagery on the caudal side of the cyst. The content of the cyst was liquid but very thick. The cyst was localised on the small bowel mesentery. The bowel seems to be integrated by this cystic mass and we decided to perform a segmental bowel resection with anastomosis. The post operative course was uneventful and the patient was discharged on 5 day of hospitalisation (Figure 3).

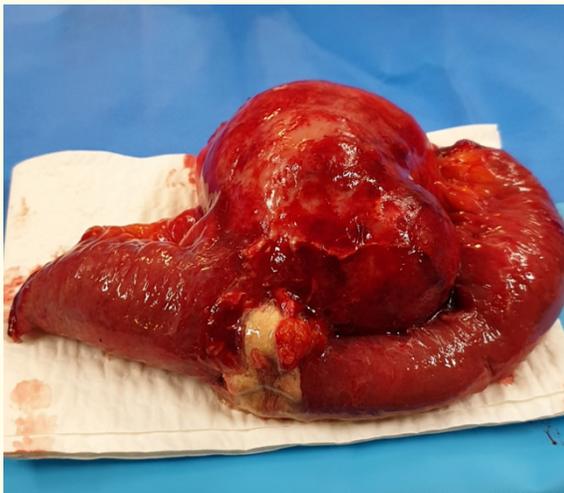


Figure 3: Macroscopic image of the operative piece.

A bacteriological sample was taken who was negative. The anatomopathological exam reveal a cystic structure which adheres to the small bowel wall in an extrinsic manner. It is lined with epithelioid macrophages and inflammatory cells and filled with cellular debris. It is surrounded by a fibrous and slightly inflammatory reaction, sometimes in the form of lymphoid clusters. No sign of specificity.

Discussions

The symptomatology of the mesenteric cysts is represented by the presence of a painless abdominal mass or abdominal pain

(55–82%), palpable abdominal lumps (44 - 61%) and abdominal distention (17 - 61%), nausea and vomiting (45%), constipation (27%), diarrhoea (6%) or associated symptomatology due to the compression of adjacent structures [3-5]. The symptomatology can include early satiety or dyspepsia. Mesenteric cysts commonly originate in the small bowel mesentery, mesocolon (24%), retroperitoneum (14.5%) and very rarely from the sigmoid mesentery [6]. Mesenteric cysts are lined by a single layer of columnar or cuboidal epithelial cells. This layer is sometimes destroyed as a result of pressure exerted by the cyst fluid and the cyst wall becomes composed of fibro collagenous tissues along with chronic inflammatory cells [7]. Concerning the malignancy, is reported to be at 3%, but when there are solid components in the cyst, malignancy rate can be higher [8,9].

Differential diagnosis includes omental cyst, pancreatic or non-pancreatic pseudocyst, echinococcal cyst, enteric duplication cyst, cystic mesothelioma, and ovarian cyst, as well as ascites and lymphoma [10]. Cystic lymphangioma is a benign and rare tumour of lymphatics vessels localized on subcutaneous tissue of face and neck (60%), limb (20%), thoracic (10%) and axillar regions. The abdominal (2 - 10%), and thoracic (5%) localizations are rare. The average size of mesenteric cysts ranges from 2 to 35 cm. 6 Chylous cysts represent 7.3% of all abdominal cysts and are diagnosed most often during the fifth decade of life and they affect both sexes equally [11].

Mesenteric or retroperitoneal cysts do not cause specific symptoms. The occurrence of a patient's symptoms depends on the size of the lesion; smaller cysts often remain asymptomatic. These lesions are often diagnosed incidentally during abdominal imaging for other medical reasons [10]. Physical examination and abdominal US indicate remarkable ascites, giant cyst may be mistaken for ascites on physical examination and imaging studies. Therefore, this diagnosis should be included in the differential diagnosis of abdominal distention, even when radiological examination indicates ascites [12-16].

Complete surgical excision is considered first line of treatment. If size or location of the cyst precludes complete surgical excision, partial excision with marsupialization of the opening of the cyst into the abdominal peritoneal cavity is a second option [17]. Mesenteric cyst should be resected in order to avoid their complications recurrence, malignant transformation and possible complications (haemorrhage, torsion, obstruction, traumatic rupture and infection) [18]. Complete excision by laparoscopic or open technique is gold standard while simple aspiration or marsupialisation demonstrate higher recurrence rates. While follow-up periods in the literature ranged from 3 to 48 months using ultrasound imaging, there appears to be minimal benefits in long-term follow-up as recurrence is rare and generally occurs early [19, 20].

In our case we decide to perform a segmental resection of the adjacent bowel due to the inability to exclude malignancy. Com-

plete excision is important due to the potential of malignant transformation. The particularity of this case is the presence in emergency with abdominal pain due to a perforated mesenteric cyst. Abdominal echography can be an option in emergency setting but the presence of air presence inside the bowel can provide a low quality of the image. The abdominal Computed tomography is the imagery exam of choice due to the possibility of a complete exploration of the abdomen and pelvis. This exam is able to identify also the complications correlated to the cyst, like perforation in our case. Abdominal MRI can provide a better characterisation of the cyst but this exam is limited in emergency setting.

We were not able to identify the origin of the cyst due to the lack of specificity revealed on the anatomopathological exam. Also we were not able to found in the literature any description of cases where the presence of cyst was correlated with the presence of ulcerative colitis, or if the mesenteric cyst is a result of ulcerative colitis and mesocolon chronic inflammation or is just a coincidence. Further studies will be necessary to clarify if there is a relationship between the ulcerative colitis and a mesenteric cyst.

Conclusion

Mesenteric cysts are lesions with a low malignant potential risk and are usually asymptomatic. Mesenteric cyst perforation is an unusual diagnostic in emergency setting. Surgery with complete excision of the cyst is the treatment of choice. Further studies are necessary to search if there is a correlation between ulcerative colitis and mesenteric cyst.

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