CASE REPORT

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A Rare Cause of Abdominal Pain: Intra-abdominal Mesenteric Cyst

Nadir Görülen Bir Karın Ağrısı Nedeni: Batın İçi Mezenterik Kist

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ABSTRACT

Mesenteric cysts are benign cystic structures classified within benign lesions seen in the abdomen. More common in adulthood. It is mostly seen in the small bowel mesentery. It may present with a wide scale ranging from clinically asymptomatic to perforation. Imaging methods are the most helpful tests in diagnosis. Biopsy is not usually recommended. Treatment is total excision of the cyst. We planned to discuss the diagnosis and treatment of mesenteric cysts with 2 patients we operated on in our clinic with the diagnosis of intra-abdominal cysts. Patients, aged 24 and 52, came with complaints of abdominal pain. A preliminary diagnosis of intra-abdominal mesenteric cyst was made by ultrasonography and computerized tomography and an elective operation was planned. The patients underwent laparoscopic total cyst excision. Pathology results were mesenteric cysts. It should be kept in mind that mesenteric cysts may be a cause of acute or chronic abdominal pain. Imaging methods have an important place in the diagnosis. The treatment is total excision of the cyst.

Keywords: Abdominal pain, mesenteric cyst, laparoscopy

ÖZ

Mezenterik kistler, batın içinde görülen benign lezyonlar arasında sınıflandırılan iyi huylu kistik yapılardır. Erişkin çağda daha sık görülür. En sık ince barsak mezenterinde görülür. Klinik olarak asemptomatik tablodan perforasyona kadar geniş bir skala ile karşımıza çıkabilir. Görüntüleme yöntemleri ile tanıda en çok yardımcı tetkiklerdir. Biyopsi genellikle önerilmez. Tedavisi kistin total eksizyonudur. Kliniğimizde batın içi kist ön tanısı ile opere edilen 2 hasta ile mezenterik kistlerin tanı ve tedavisini tartışmayı planladık. Yirmi dört yaşında ve 52 yaşında iki hastamıza karın ağrısı şikayetleri ile başvurmaları üzerine yapılan tetkik ultrasonografi ve bilgisayarlı tomografi ve muayeneler sonucunda batın içi mezenterik kist ön tanısı konularak elektif operasyon planlandı. Hastalara laparoskopik total kist eksizyonu uygulandı. Patoloji sonuçları da mezenterik kist ile uyumlu olarak geldi. Akut ya da kronik karın ağrısı sebepleri arasında mezenterik kistlerin olabileceği, görüntüleme yöntemlerinin tanıda önemli yeri olduğu ve tedavisinin kistin total eksizyonu olduğu akılda tutulmalıdır.

Anahtar Kelimeler: Karın ağrısı, mezenterik kist, laparoskopi

Introduction

Mesenteric cysts are rare benign lesions seen in the abdomen. It can occur at any age, with a higher percent in adults. Its incidence in adults is approximately 1/100,000. It originate mostly from the small intestine with a rate of 60% (1,2). Mesenteric cysts are usually asymptomatic. However, it may present with acute abdomen clinic such as obstruction and perforation. When symptomatic, the most common finding is abdominal pain. Depending on the size of the cyst, it may occur in the form of palpable mass in the abdomen. Ultrasonography (USG) and especially abdominal computerized tomography (CT) are helpful in the diagnosis and evaluation of adjacent structures (1). Differential diagnosis from malignant lesions is important to plan the surgery. The malignancy risk of mesenteric cysts is about 3% (2). Biopsy may damage the wall integrity of the cyst. It is not usually recommended because of the possibility of perforation of the cyst. The treatment is total excision of the cyst without perforation, if possible. In our case report, we planned to discuss the diagnosis and treatment of mesenteric cysts with 2 patients who were operated on in our clinic with the pre-diagnosis of intra-abdominal cysts.

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Case Report

Our first case was a 24-year-old male patient; He applied to the emergency department with the complaint of abdominal pain. He was describing a persistent pain in the periumbilical region for about 1 month and had increased in the last 2 days. On physical examination, there was no pathology except periumbilical region tenderness. As a result of the examinations (USG and CT), an intra-abdominal cystic lesion measuring approximately 3x3 cm was detected (Figure 1). There was no acute abdomen clinic so the operation was planned under elective conditions, after ruling out infective causes of the cystic lesion. The patient underwent laparoscopic total cyst excision. Peroperatively, it was determined that the cystic structure originated from the proximal ileum meso. Pathology result was consistent with mesenteric cyst. No complications were observed in the postoperative period follow-up.

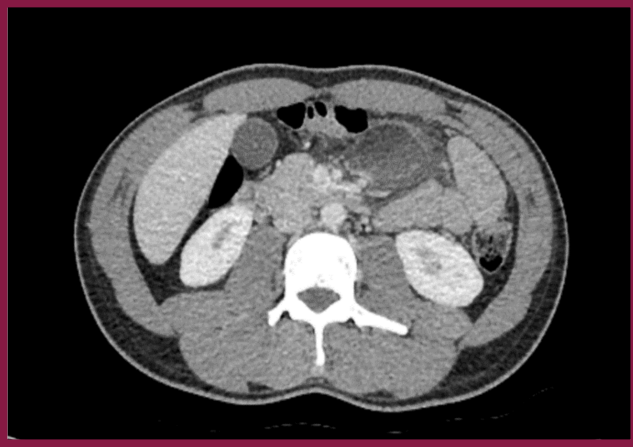

Figure 1. First case abdominal CT image
CT: Computerized tomography

Figure 2. CT image of the second case before pochography
CT: Computerized tomography

Our second case, a 52-year-old male patient, presented with umbilical swelling and right flank pain. He stated that his flank pain, which had been intermittent for 6 months, had increased recently. The patient had no history of pancreatitis or any other intra-abdominal infection. As a result of the CT, umbilical hernia and a cystic lesion of approximately 16x12 cm in the abdomen extending from the subhepatic region to the right pelvic region and close to the duodenum and right colon were detected (Figure 2). Endoscopic USG was also done due to the close proximity of the cyst to the duodenum. No relationship was observed with the pancreas. In addition, colonoscopy was also performed to exclude other causes of abdominal pain, there was no pathology except diminutive polyps. In the preoperative period, pochography was performed in order to reveal the irregularity of the wall of the cystic structure and its possible relationship with the gastrointestinal system (Figure 3). It was observed that it was adjacent to the gastrointestinal tract, but not directly involved. Laparoscopic total cyst excision and umbilical hernia repair was done. During the operation, it was seen that the cyst originated from the ascending colon mesentery. Pathological examination result was mesothelial cyst.

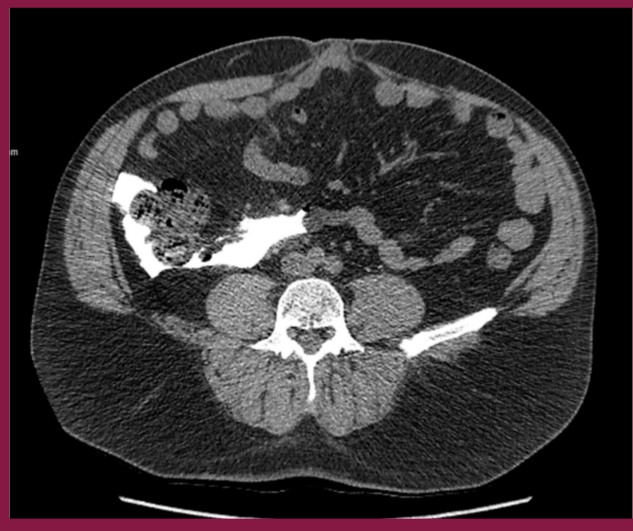

Figure 3. Second case pochography image

Material and Methods

Imaging examinations of the patients in the preoperative period were performed in the Radiology Department of University of Health Sciences Türkiye, Sultan 2. Abdülhamid Han Training and Research Hospital, and the resection materials were evaluated in the Pathology Laboratory of University of Health Sciences Türkiye, Sultan 2. Abdülhamid Han Training and Research Hospital.

Discussion

Mesenteric cysts are benign lesions originating from the mesentery of the gastrointestinal organs from the duodenum to the rectum. Its incidence in adults is approximately 1/100,000 (1). It occurs most frequently in the 4th decade and is observed in adults with a rate of 75% (2). Although it is said that there is no gender difference in terms of its incidence, it has been reported that it is more frequently seen in women in recent years (3).

It was first reported by the anatomist Benevieni in 1907 in an 8-year-old girl (4). A mesenteric cyst is a fluid-filled sac lined with endothelium or mesothelium that occurs anywhere in the mesentery from the large intestine to the duodenum. This fluid may be serous, chylous, bloody, or chylolymphatic, and the cyst may be from a single sac, septate, or multilocular. Similar cysts can occur in the omentum and retroperitoneum. In the largest reported mesenteric cyst case series, it was found that cyst sizes ranged from 2-36 cm and 60% of them was associated with the small intestine mesentery, 24% with the large intestine and 16% with the retroperitoneum (5).

Cysts detected in the small intestine meso are mostly observed in the ileal region, while in the large intestine they usually originate from the cecum and ascending colon; it rarely originates from the descending colon, sigmoid colon and rectum (6). It can also be confused with ovarian cysts (7). It was observed that the cyst originated from the ileum meso in one of our patients and from the colon meso in our other patient. Clinically, it is usually asymptomatic. When symptomatic, they often present with abdominal pain. However, it may be seen with acute abdomen clinic such as perforation and obstruction (8,9,10). In our cases, both patients applied to the hospital because of abdominal pain. There was no acute abdomen clinic in the patients, elective operation was planned.

There is no specific laboratory finding for intra-abdominal mesenteric cyst. However, tests can be performed to rule out infective etiologies that may cause cystic lesion formation, such as hydatid cyst. Imaging methods are more helpful in diagnosis. Abdominal USG detects an intra-abdominal cyst, but CT will be more useful in terms of determining the structures from which it originates and which are adjacent to it (11). The location of the mesenteric cysts, their neighbors, and the characteristics of the wall were revealed by tomography, which was also taken in the patients we presented. In addition, in our second case, pochography was performed to determine the preoperative surgical margins of the cyst. It's not a routinely recommended procedure. However, in our case, it was planned because the cyst was large and a possible gastrointestinal system relationship might change the surgical planning. Pathological evaluation of the sample taken while pochography procedure, also resulted as benign mesothelial cells. This result was also useful in excluding malignancy. No complication was observed during or after pochography. Ma et al. (12) also reported the successful drainage of the giant mesenteric cyst in the abdomen under ultrasound guidance in the case they presented.

The treatment for symptomatic mesenteric cyst is surgical total excision of the cyst (13). If possible laparoscopic surgery is recommended. Laparoscopic total cyst excision was performed in our patients with the pre-diagnosis of intra-abdominal mesenteric cyst. No postoperative complications were seen in the follow-ups and symptoms have regressed. Pathological examination after surgery resulted as mesenteric cyst, no malignancy was observed. Intra-abdominal mesenteric cystic lesions are rare, highly benign lesions. Although it is usually asymptomatic, it may also present with clinical signs and symptoms such as abdominal pain, rupture, bleeding, intestinal obstruction. A high rate of diagnosis is made by imaging methods. Surgery should be planned for symptomatic cysts. Asymptomatic cysts could be followed after excluding malignancy. It should be kept in mind that mesenteric cysts may be one of the causes of acute or chronic abdominal pain and its treatment is total excision of the cyst.

Ethics

Informed Consent: Informed consent was obtained.

Peer-review: Internally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: S.E.B., B.G., L.D.E., Y.K.K., M.S.G., Concept: S.E.B., L.D.E., Design: S.E.B., B.G., Y.K.K., M.S.G., Data Collection or Processing: S.E.B., L.D.E., Y.K.K., M.S.G., Analysis or Interpretation: B.G., L.D.E., M.S.G., Literature Search: S.E.B., B.G., Y.K.K., Writing: S.E.B., L.D.E., M.S.G.

Conflict of Interest: No conflict of interest was declared by the authors.

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References

1. Reis DG, Rabelo NN, Aratake SJ. Mesenteric cyst: abdominal lymphangioma. ABCD. Arq Bras Cir Dig. 2014;27:160-161. [Crossref]
2. Kurtz RJ, Heimann TM, Holt J, Beck AR. Mesenteric and retroperitoneal cysts. Ann Surg. 1986;203:109-112. [Crossref]
3. Tan JJ, Tan KK, Chew SP. Mesenteric cysts: an institution experience over 14 years and review of literature. World J Surg. 2009;33:1961-1965. [Crossref]
4. Mohanty SK, Bal RK, Maudar KK. Mesenteric cyst--an unusual presentation. J Pediatr Surg. 1998;33:792-793. [Crossref]
5. Rattan KN, Nair VJ, Pathak M, Kumar S. Pediatric chylolymphatic mesenteric cyst - a separate entity from cystic lymphangioma: a case series. J Med Case Rep. 2009;3:111. [Crossref]
6. Steenvoorde P, Tanka AK. Gastrointestinal: mesenteric cyst. J Gastroenterol Hepatol. 2003;18:993. [Crossref]
7. Felemban A, Tulandi T. Laparoscopic excision of a mesenteric cyst diagnosed preoperatively as an ovarian cyst. J Am Assoc Gynecol Laparosc. 2000;7:429-431. [Crossref]
8. El-Agwany AMS. Huge mesenteric cyst: Pelvic cysts differential diagnoses dilemma. The Egyptian Journal of Radiology and Nuclear Medicine. 2016;47:373-376. [Crossref]
9. Yavuz Y, Varman A, Şentürk ÜM, Kafadar MT. Mesenteric Cyst in 22 Cases. J Gastrointest Cancer. 2021;52:993-996. [Crossref]
10. Mullaney TG, D'Souza B. Mesenteric cyst: an uncommon cause of acute abdomen. ANZ J Surg. 2019;89:E98-E99. [Crossref]
11. Prakash A, Agrawal A, Gupta RK, Sanghvi B, Parelkar S. Early management of mesenteric cyst prevents catastrophes: a single centre analysis of 17 cases. Afr J Paediatr Surg. 2010;7:140-143. [Crossref]
12. Ma A, Ayre K, Wijeyekoon S. Giant mesenteric cyst: a rare cause of abdominal distension diagnosed with CT and managed with ultrasound-guided drainage. BMJ Case Rep. 2012;2012:bcr0220125916. [Crossref]
13. Gagliardi F, Lauro A, Tripodi D, Amabile MI, Palumbo P, Di Matteo FM, et al. Mesenteric Cyst with GI Symptoms: A Fluid Approach to Treatment-Case Report and Literature Review. Dig Dis Sci. 2022;67:786-798. [Crossref]