Research Article

Mesenteric Dermoid Cyst Presenting with Left Loin Pain: A Rare Case Report

Dr Mahalakshmi Guna[1], Dr. Venkat Vidhur P[2], Dr. Dheenu. S[3] ,Dr Eazhisai Chelvan R A[4]

[1]Department Postgraduate, Department of General Surgery, SRM Medical College Hospital and Research Centre, Faculty of Medicine and Health Sciences, SRM Institute of Science and Technology, Kattankulathur, Chengalpattu, Tamil Nadu, India Email: mahalakshmigmrl@gmail.com, Orchid id:0009-0007-6093-9676
[2]Post-graduation, Department of general surgery, SRM Medical College Hospital and Research Centre, Faculty of medicine and health sciences, SRM institute of science and Technology, kattankulathur, Chengalpattu, Tamil Nadu E-mail - pvvidhur@gmail.com
[3]Postgraduate, Department of General Surgery, SRM Medical College Hospital and Research Centre, Faculty of Medicine and Health Sciences, SRM Institute of Science and Technology, Kattankulathur, Chengalpattu, Tamil Nadu, India Email: ds0446@srmist.edu.in, ORCID: 0009-0003-0927-3566
[4]Assistant Professor Department of general surgery,SRM Medical College Hospital and Research Centre, Faculty of medicine and health sciences, SRM institute of science and Technology, kattankulathur, Chengalpattu, Tamil Nadu, eazhisaichelvan@gmail.com , ORCID iD: 0009-0008-7413-3320

Abstract

Mesenteric cysts are uncommon intra-abdominal lesions, and the dermoid variety is rarer still. They have no characteristic clinical or radiological signature, so a correct diagnosis before surgery is seldom made. We report a 50-year-old woman who came with continuous, throbbing pain in the left loin, together with ten days of epigastric pain and a history of constipation. Ultrasonography showed a 5.3×4.8×4.3 cm lesion in the left lumbar quadrant, and a complex cyst or a neoplasm was suspected. Contrast-enhanced computed tomography (CECT) showed a well-defined, round lesion in the left anterior pararenal space with areas of fat density; a dermoid cyst (teratoma) and an extra-adrenal myolipoma were the main considerations. At diagnostic laparoscopy, a 4×4 cm cyst was found adherent to the surrounding mesentery and was excised in toto. Opening the cyst released thick, gelatinous, mucinous material. Histopathology showed a fibrocollagenous cyst wall with cystic macrophages, histiocytes, Langerhans cells and a foreign body reaction. Complete excision without unroofing or marsupialisation is the accepted treatment, since incompletely treated cysts tend to recur. This case is reported because of its rarity and to remind clinicians that a mesenteric dermoid cyst can be the answer when a cystic-looking intra-abdominal lump is found at an unusual site.

Keywords: Diagnosis; Differential; Laparoscopy; Mesenteric cyst; Teratoma.

INTRODUCTION

1. Case Report

A 50-year-old woman came to the surgical outpatient department with continuous, throbbing pain in the left loin. Nothing she did seemed to make it better or worse. For the previous ten days she had also been troubled by pain in the epigastric region, and she gave a history of constipation.

Ultrasonography of the abdomen showed a lesion measuring 5.3×4.8×4.3 cm in the left lumbar quadrant, and the possibilities offered were a complex cyst or a neoplasm. CECT of the abdomen then showed a well-defined, round, iso-dense lesion in the left anterior pararenal space, with areas of fat density within it. On imaging, the differential diagnosis was a dermoid cyst (teratoma) or an extra-adrenal myolipoma.

She was taken up for diagnostic laparoscopy (Figures 1, 2). A 4×4 cm cyst was seen, adherent to the surrounding mesentery and to the jejunum about 20 cm from the duodenojejunal flexure. The cyst was excised in toto (Figure 3). When it was opened, thick, gelatinous, mucinous material came out.

The specimen was sent for histopathological examination. Microscopy showed a fibrocollagenous cyst wall containing cystic macrophages, histiocytes and Langerhans cells, along with a foreign body reaction.

Figure 1: Operative field with the abdomen painted and draped



Figure 2: Laparoscopic view of the cyst

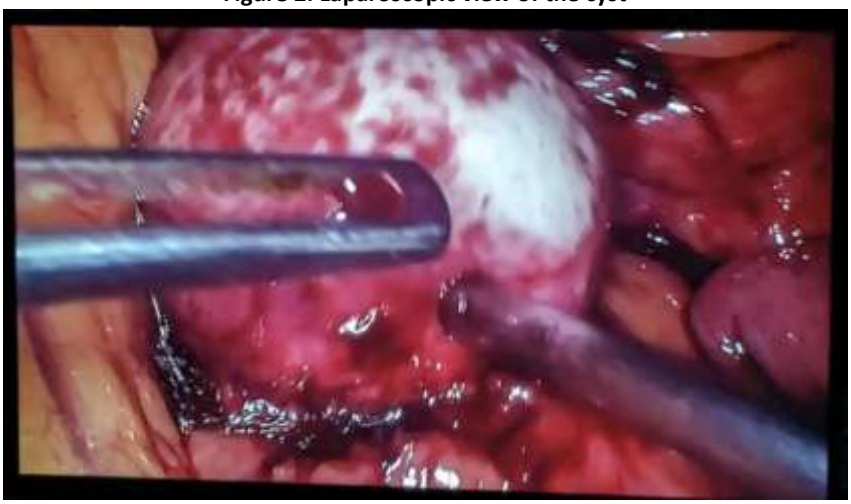


Figure 3: Excised specimen with thick, gelatinous material from the cyst



2. Discussion

A mesenteric cyst is an uncommon problem. It can turn up in almost any quadrant of the abdomen, and it is often found by accident. The reported frequency is about one in 100,000 adult admissions [1], and the dermoid type is rarer still. Several theories have been put forward for how these cysts form, but the exact cause remains unknown. Cysts of the mesentery, omentum and retroperitoneum are traditionally discussed together [2,3], because these structures are all lined by peritoneum and are made up of connective tissue containing fat, lymphatic channels, blood vessels, a few muscle fibres and neural tissue. A cyst at any of these sites can therefore arise from any of these tissues.

The theory most widely accepted was proposed by Gross, who described a benign proliferation of ectopic lymphatics in the mesentery that never joined the rest of the lymphatic system [4]. Failure of lymphatic channels to connect with the lymphatic or venous system, and blockage of the lymphatics after trauma, infection or a neoplasm, have also been suggested as contributing factors.

The histopathological classification of de Perrot and colleagues is the one used most often [5]. It places mesenteric cysts into six groups: cysts of lymphatic origin, cysts of mesothelial origin, enteric cysts, cysts of urogenital origin, dermoid cysts, and pseudocysts. Our patient's cyst belongs to the dermoid group. Here we describe a dermoid cyst lying in the left pararenal region and adherent to the jejunum, which is an unusual presentation [6–8].

The symptoms of a mesenteric cyst depend on its size and position. Patients may report vague abdominal discomfort, acute or chronic pain, or a swollen abdomen. Pressure on neighbouring structures can cause intermittent pain, and some patients complain of loss of appetite, nausea, vomiting, tiredness or weight loss. Rupture or bleeding into the cyst can lead to shock. On examination a mass may be felt that moves only from right to left or left to right, which is known as the Tillaux sign. The left loin and epigastric pain and the constipation in our patient may have been caused by the cyst pressing on adjacent structures.

Ultrasonography, CT and MRI are the investigations used to study these lesions. A unilocular cyst with no solid component on CT points strongly towards a benign cyst. In our patient the areas of fat density seen on CECT widened the differential diagnosis to include a dermoid cyst and an extra-adrenal myolipoma, and a firm diagnosis could be made only after histopathology. This fits the general experience that mesenteric cysts are hard to diagnose on clinical and radiological grounds alone.

The presence of macroscopic fat on CT can be a useful clue to a dermoid cyst or mature cystic teratoma, but it is not specific enough to establish the diagnosis on its own. Depending on the site and appearance, fat-containing lesions such as lipomatous tumours and extra-adrenal myelolipoma may also be considered. Published case reports of mesenteric dermoid cysts similarly describe uncertainty on preoperative imaging, with the diagnosis ultimately established after excision and histopathological examination [8,12]. In the present case, the left anterior pararenal location and the close attachment to the jejunal mesentery made the diagnosis particularly challenging.

Histopathology is therefore central not only to confirming the nature of the lesion but also to distinguishing a true dermoid cyst from other mesenteric cysts. Mature dermoid cysts classically show keratinising squamous epithelium and may contain skin appendages, such as hair follicles or sebaceous glands; however, the reported microscopic description in this case mentions a fibrocollagenous wall, histiocytes, Langerhans cells and a foreign-body reaction. The final histopathology report should be checked and the presence or absence of an epithelial lining and skin appendages stated explicitly, so that the diagnostic label is fully supported [5,12].

Surgery is the treatment for symptomatic simple mesenteric cysts, and the cyst can be removed either by open surgery or laparoscopically [9,10]. Unroofing and marsupialisation are not advised, because mesenteric cysts have a high tendency to recur [11]. Cysts that are not enterogenous have a blood supply of their own and can be enucleated without disturbing the blood supply of the bowel. An enterogenous cyst shares the blood supply of the adjacent bowel, so it is treated by resection and anastomosis. Occasionally the neighbouring mesentery or bowel is stuck to the cyst, or mesenteric vessels have to be sacrificed to achieve complete removal. In our patient the cyst was excised in toto.

Laparoscopy can be both diagnostic and therapeutic in appropriately selected patients, particularly when the lesion is well circumscribed and can be separated safely from adjacent bowel and mesenteric vessels. The operative objective is complete excision while preserving the blood supply and integrity of the involved bowel. If the cyst shares a wall or blood supply with the intestine, or cannot be safely separated, bowel resection may be necessary. Simple aspiration, unroofing or marsupialisation leaves the cyst lining behind and is generally avoided because of the risk of persistence or recurrence [9–11,13]. In this patient, the cyst was removed in toto laparoscopically despite its adherence to the jejunal mesentery, avoiding the need for bowel resection.

3.Conclusion

A mesenteric dermoid cyst is a rare finding and is easy to miss before surgery, since it can look like a complex cyst or a fat-containing tumour on imaging. It is worth keeping in mind as a differential diagnosis for intra-abdominal lumps that appear cystic. Complete excision of the cyst is the aim of treatment.

References

1. 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.
2. Kurtz RJ, Heimann TM, Holt J, Beck AR. Mesenteric and retroperitoneal cysts. Ann Surg. 1986;203(1):109–112.
3. Vanek VW, Phillips AK. Retroperitoneal, mesenteric, and omental cysts. Arch Surg. 1984;119(7):838–842.
4. Gross RE. The Surgery of Infancy and Childhood. Philadelphia: WB Saunders; 1953.
5. de Perrot M, Bründler M, Tötsch M, Mentha G, Morel P. Mesenteric cysts. Toward less confusion? Dig Surg. 2000;17(4):323–328.
6. Torreggiani WC, Brenner C, Micallef M, O'Laoide R. Case report: Caecal volvulus in association with a mesenteric dermoid. Clin Radiol. 2001;56(5):430–432.
7. Buonanno G, Gonnella F, Pettinato G, Castaldo C. Autoimmune hemolytic anemia and dermoid cyst of the mesentery. A case report. Cancer. 1984;54(11):2533–2536.
8. Haddadi S, Djouimaa S, Ourdane R, Khelafi L, Yahia-Messaoud Y, Touati R. Right mesocolic dermoid cyst: A case report and literature review. J Skin Stem Cell. 2024;11(4):e154127.
9. Punguyire D, Iserson KV. Mesenteric dermoid cyst in a child. Pan Afr Med J. 2011;10:41. doi:10.11604/pamj.2011.10.41.822.
10. Rajendran S, Khan A, Murphy M, O'Hanlon D. The diagnosis and treatment of a symptomatic mesenteric cyst. BMJ Case Rep. 2014;2014:bcr2013202410. doi:10.1136/bcr-2013-202410.
11. Theodoridis TD, Zepiridis L, Athanatos D, Tzevelekis F, Kellartzis D, Bontis JN. Laparoscopic management of mesenteric cyst: A case report. Cases J. 2009;2:132.
12. Mason JE, Soper NJ, Brunt LM. Laparoscopic excision of mesenteric cysts: A report of two cases. Surg Laparosc Endosc Percutan Tech. 2001;11(6):382–384.
13. Jain V, DeMuro JP, Geller M, Selbs E, Romero C. A case of laparoscopic mesenteric cyst excision. Case Rep Surg. 2012;2012:594095.