CASE REPORT

Mesenteric cyst: an unusual presentation

Prosanta Kumar Bhattacharjee · Himanshu Rai · Navin Ram · Debarati Chattopadhyya · Rajendra Prashad Roy

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Abstract A 5-year-old boy presented with the history of a small lower abdominal swelling since childhood which increased in size and became painful following a fall. Examination revealed a mobile, globular, cystic intra-abdominal mass in the lower abdomen. Ultrasonography of the abdomen suggested a 7.5×5.5 cm cystic lesion, separate from the bladder, containing an echogenic mobile mass. Intra venous urography excluded any abnormality of the kidneys, ureters and bladder. Exploratory laparotomy revealed a sigmoid mesenteric cyst protruding out of one of the mesenteric leaves and attached to it by a narrow stalk. The excised cyst was found to be thin walled and unilocular. It was internally lined with fibrinous exudate and contained serous fluid and a solid spherical blood clot. The child had an uneventful postoperative recovery. Histopathology of the cyst wall showed maturing granulation and fibrous tissue with hemosiderin laden macrophages and lymphoid aggregates consistent with the diagnosis of a lymphangioma with chronic inflammatory changes and evidence of past hemorrhage.

Keywords Mesenteric cyst · Complications · Hemorrhage.

Introduction

The first reported mesenteric cyst is ascribed to the Italian anatomist Beneviene who described it following an autopsy on an 8-year-old girl in 1507 [1]. They are rare benign, intra-abdominal lesions with an incidence of around 1 in 140,000 general hospital admissions [2]; approximately one third of the patients being children younger than 15 years [3]. They usually present either with non-specific abdominal features, incidentally detected abdominal mass or with one of their complications like intestinal obstruction (volvulus), torsion, rupture, hemorrhage, obstruction of urinary and biliary tract [4]. Hemorrhage within a cyst typically presents with an acute abdomen; dark brown fluid being the content.

Herein is a report of an atypical post traumatic hemorrhage within mesenteric cyst of sigmoid mesocolon, in a child, presenting with an abdominal mass which revealed serous fluid and a fairly large spherical blood clot within it.

Case report

A 5-year-old boy reported at the surgical OPD with 3 months history of lower abdominal distension in association with occasional complains of mild lower abdominal pain of same duration. The child had a painless, tennis ball sized swelling in lower abdominal since childhood which became painful and rapidly increased in size after a fall on ground while playing. Following some medication the pain was gradually relieved but the swelling persisted. There was no history of vomiting or temperature. His bowel and

P. K. Bhattacharjee · H. Rai · N. Ram · D. Chattopadhyya ·
R. P. Roy
Dept. of Surgery,
I.P.G.M.E&R / S.S.K.M Hospital,
Kolkata - 20, West Bengal, India.

P. K. Bhattacharjee (✉)
e-mail: prosantabh@rediffmail.com

bladder habits were unaltered. His appetite was normal and there was no recent history of weight loss. There was no significant past or family history.

On examination the child was of normal built and nutrition. He had a smooth, globular, non-tender, tense cystic mass, measuring approximately 8 cm in diameter occupying the lower abdomen. The swelling was mobile in the transverse axis and showed limited mobility along the vertical axis. The mass was not palpable on digital rectal examination. There was no other palpable lump or any organomegaly.

Routine hematological and biochemical examinations were normal except for a low hemoglobin percentage. Ultrasonography (USG) of the abdomen suggested a unilocular, cystic lesion (7.5 cm × 5.5 cm) in the lower abdomen; separate from the kidneys and bladder but in close relation to the gut wall, containing an echogenic mobile mass within it. The exact site of origin could not be defined. Intra venous urography (IVU) excluded any abnormality of the kidneys, ureters and bladder. The clinical signs and symptoms in conjunction with the investigative findings suggested the diagnosis of a gut related cyst possibly of mesenteric origin.

The child underwent an exploratory laparotomy through a transverse incision. There was a spherical, tense, thin walled cyst with a narrow stalk located within the leaves of the sigmoid mesentery, at its upper part (Fig. 1). The cyst had no attachment to the colonic wall. There were many other small thin walled cysts containing clear fluid located in different parts of the ileal mesentery. The large cyst in the sigmoid mesocolon could be enucleated intact with ease, there being no adhesion between the cyst and the mesocolic vessels. Gross appearance of the cut open specimen was that of a whitish, unilocular thin walled cyst lined with fibrinous exudate on the inside, containing clear fluid and a spherical, solid blood clot (Fig. 2). Other smaller cysts were left alone. Histopathology of the cyst wall showed maturing granulation, hemosiderin laden macrophages and fibrous tissue with lymphoid aggregates consistent with the diagnosis of a benign mesenteric lymphangioma with secondary changes due to chronic inflammation and past hemorrhage.

The child had an uneventful postoperative recovery and was discharged from hospital after 10 days.

Discussion

Mesenteric cysts are rare, benign intra-abdominal lesions which are discovered accidentally or during management of one of their complications [4]. They can occur anywhere in the area between the duodenum and the rectum, but are most common in the small bowel mesentery especially the ileum [5]. There are varieties of mesenteric cysts including lymphangiomas (mesothelial cysts), enteric duplication cyst, urogenital, teratomatous, gas, mycotic, parasitic,

Fig. 1 Tense, thin walled cyst with a narrow stalk located in the sigmoid mesentery.

Fig. 2 Unilocular thin walled cyst lined with fibrinous exudate on the inside, containing a solid brown ball of blood clot.

tubercular cysts, traumatic pseudocyst (serosanguinous cyst), and cysts following malignant degeneration [6].

They may present with chronic abdominal pain, distension or vomiting, painless abdominal mass or with an acute abdomen (with pain, distension or vomiting) [2]. The rarity of the lesions and the absence of characteristic findings make the diagnosis difficult.

Pathologically, mesenteric cysts vary in size and shape from a few centimeters to a size that can occupy most of the peritoneal cavity. They can be single or multiple and uni- or multi-loculated. The contents vary from clear serous (ileal and colonic cysts) to milky (jejunal cysts) or dark brown due to hemorrhage [5]. This reported case had cysts of different sizes located in different parts of the ileal and colonic mesentery. The peculiarity of this case is the atypical presentation of hemorrhage within the cyst. Instead

of brownish fluid as content, it contained a brown ball of blood clot.

Differential diagnosis includes ovarian cysts, pancreatic, renal or splenic cysts, choledochal cyst, hydatid cyst, hydronephrosis, intussusception, appendicular abscess or loculated ascites.

Known complications with which mesenteric cysts may present are torsion, rupture, hemorrhage, intestinal obstruction due to volvulus, extraneous pressure on nearby organs and very rarely malignant transformation- usually sarcomata though adenocarcinoma have also been reported [4, 5]. The possibility of a complicated mesenteric cyst should be considered in the differential diagnosis in patients with an acute abdomen [3].

USG is the diagnostic method of choice. Other modality, useful in selected cases, includes IVU, barium contrast studies, CT scan and MRI.

Cyst enucleation, as in this reported case, is the treatment of choice. Complete excision with intestinal

resection and internal drainage (marsupialization) are other options.

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