Case Report

MESENTERIC CYST OF THE DISTAL ILEUM: A CASE REPORT

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Abstract: Mesenteric cysts are rare abdominal tumors. We present case report of 57 year old male patient with vague intermittent abdominal pain mainly in right hypochondrium and right lumbar region. Ultrasound (US) and CT-scans confirmed the presence of oval hypodense cystic tumor. After standard preoperative preparation patient was operated.

Key words: Mesenteric cyst, Intra abdominal

Introduction

Mesenteric cysts are rare abdominal tumors with an incidence of 1/105000-250000 hospitalized adult surgical patients. These cysts may occur in every part of the mesentery, from duodenum to rectum. Most frequently cysts are localized in small bowel mesentery (ileum in 60%) and mesocolon (ascending colon in 40%). Mesenteric, omental and retroperitoneal cysts are often considered as one group entities because of their same embryological origin. However, although some of mesenteric cysts are well defined (for example chylous cysts) there is still a controversy about the etiology and classification of most of these cystic tumors. Mesenteric cysts have similar pathogenesis, but may have different histopathological origin and structure. Most often they represent ectopic lymphatic tissue– lymphatic, chylous cysts. There are several suggested classifications of mesenteric cysts but clinically accepted classification is the one based essentially on histopathological features. It includes 6 groups of mesenetric cysts[1]. Simple lymphatic and mesothelial cysts usually remain stable and as a rule are asymptomatic over the time whereas lymphangiomas and benign cystic mesotheliomas may have invasive properties and aggressive evolution. The only genuine malignant tumor in this classification is malignant cystic mesothelioma which may, although rarely, simulate the gross appearance of benign cystic mesothelioma and therefore lead to misdiagnosis.

The etiology of mesenteric cysts is diverse. Simple lymphatic and mesothelial cysts are most likely congenital while the origin of lymphangiomas and benign cystic mesotheliomas is not yet clear . The occurrence of benign cystic mesotheliomas in females is frequently associated with a

history of previous pelvic inflammatory processes and/or surgery and endometriosis[2].

Mesenteric cysts rarely cause abdominal symptoms and are mostly accompanied by physical finding of palpable, partly movable and painless abdominal mass. In symptomatic cases diverse unspecific symptoms may occur, with most frequently presently symptom being chronic undefined abdominal pain. The preoperative diagnosis of mesenteric cysts is achieved with imaging examination of the abdomen (ultrasonography, CT, MRI) and surgical enucleation of the cyst is therapeutic method of choice.

Case Report

A 57 year old male patient was admitted to 7 Air force Hospital, Kanpur (U.P.) for vague intermittent abdominal pain mainly in right hypochondrium and right lumbar region. Patient had no previous history of blunt trauma abdomen, illnesses, allergies or surgery. On his physical examination we found firm, well defined,palpable mass and partly movable in rightlumbar region which was extending from right hypochondrium to right iliac fossa without guarding. Laboratory investigation revealed no abnormality.

Ultrasound (US) of the abdomen showed oval cystic tumor (11x14 cm) in left hypochondrium, partially filled with liquid content, with thickened wall and with its superior part compressing the spleen and gastric antrum. The posterior part of the cyst wall laid partly on pancreatic tail and body without signs of fistulization with and/or infiltration with surrounding structures. There were no enlarged lymph nodes and liquid collections intra-abdominally. Axial CT-scans confirmed the presence of oval hypodense cystic tumor with hyperdense capsule localized paraumbilically or left of the medial line. The largest diameters were 14x15 cm with identical topographic features as obtained or ultrasonography. The cyst was filled with liquid content whose densimetric values were up to 15 H.U. with small amount of gas.

After standard preoperative preparation patient was operated under general anesthesia.

Midline laparotomy was performed. Exploration of abdominal cavity revealed the presence of firm cystic tumor of ileocecal mesentery, 14x10 cm in size [Fig-1]. A moderate fibrous reaction and alteration of surrounding peritumoral mesenteric fat tissue and local peritoneum were present. The cyst was extirpated in toto; simple enucleation from the surrounding adherent layers of mesenteric tissue was performed without technical difficulties and advers incidents [Fig-2]. The procedure was finished with single drainage tube of abdominal cavity and multilayer closure of laparotomy. Postoperative course was normal.

Histopathological examination of the incised cyst showed a thick fibrous wall tightly adhered to mature fat tissue of mesentery and imbeded with chronic inflammatory cells (lymphocytes and plasma cells), and the thickness of the cyst's wall varied in size

and was the smallest on its free parts, opposite to the site of its insertion to mesentery. The inner epithelial lining was not found.

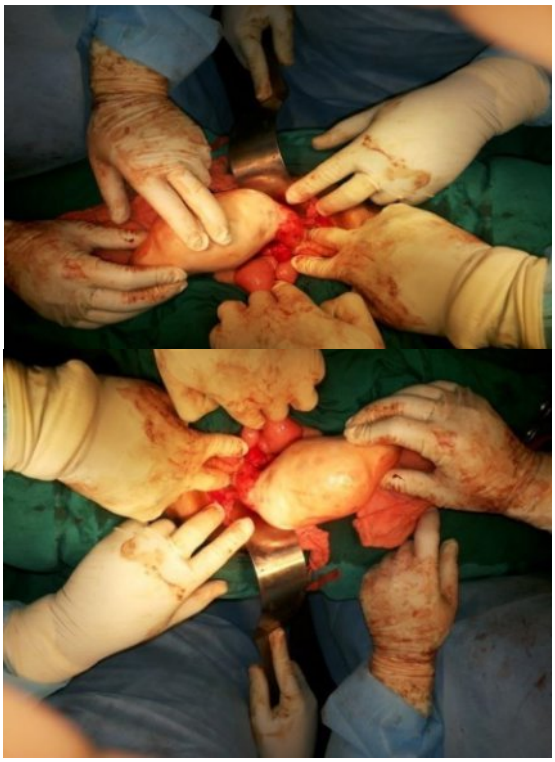

Fig: 1 Dissection of tumour (two views)

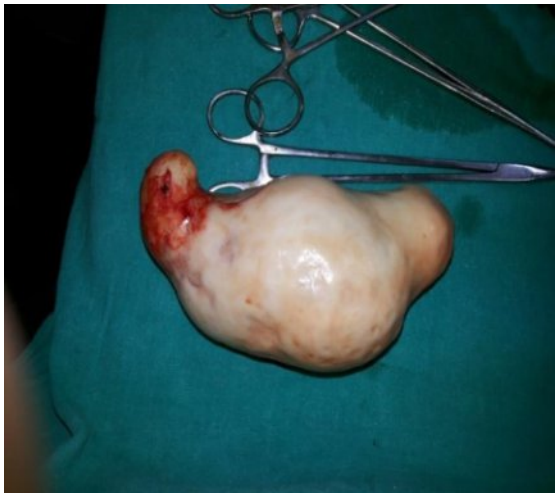

Fig -2 Lump after excision

On the inner side of cyst wall multiple aggregates of foamy macrophages were present focally. These macrophages contained dark granular pigment (hemosiderin). In one part of the cyst wall a cholesterin granuloma was also found.

Discussion

Primary mesenteric cysts are rare abdominal finding. This entity was first described in 1507 by Benevieni, Florentine anatomist, during the autopsy on an 8-year-old girl[3]. However, it was not until 1842 when Rokitansky gave the first description of a chylous mesenteric cyst. In 1880 Tillaux performed the first successful resection on a cystic mesenteric tumor[4]. After him, Pean reported the first marsupialization of a mesenteric cyst in 1883. Even today the literature reports on primary cystic tumors of mesentery are relatively rare. This lack of clinical experience in treatment of this rare surgical entity is probably the cause of controversies about its etiopathogenesis and histopathological classification. Mesenteric cysts occur with very small incidence, mainly later in life (fifth decade) and with female predominance in occurrence. The exception are cystic lymphangiomas which mostly occur in the first decade of life (up to 12 years of age), with incidence of 1/20000 hospitalized children[3] and male predominance.

Mesenteric cysts are mostly asymptomatic and if present symptoms are quite nonspecific. Contrary to adults, in children mesenteric cysts become symptomatic very often, especially the lymphangiomas. Compared to simple lymphatic and

mesothelial cysts, lymphangiomas and benign cystic mesotheliomas become symptomatic more often over time because of progressive enlargement. The size of cyst and age of patient can influence the clinical presentation. In case of inflammatory or purulent complications and rupture mesenteric cysts; a clinical picture of diffuse peritonitis, i.e. acute abdomen and septic shock may present[5]. A precise preoperative diagnosis can usually be established by systematic physical examination and radiography. USG and CT of the abdomen can distinguish between solid and cystic characteristics of abdominal mass. It is rarely necessary to perform additional diagnostic procedures (nuclear magnetic resonance (NMR), fine needle aspiration and cytological analysis and explorative laparoscopy) that may help differentiate between cystic and solid tumor and further classify the cyst.

In case of large mesenteric cyst, especially symptomatic, surgical extirpation is mandatory in order to exclude malignant alteration and prevent the development of complications such as inflammation, hemorrhage, torsion or rupture. The preferred mode of treatment is enucleation of mesenteric cyst[4], which is atraumatic separation of the cyst from surrounding leaves of mesentery. However, sometimes enucleation can not be performed safely because of firm adhesions of the cyst wall to surrounding mesenteric tissue and/or other structures. This is mostly the case with lymphangiomas and benign cystic mesotheliomas which can strongly adhere to surrounding vital structures and impede or disable their safe extirpation. Contrary, enucleation of simple lymphatic and mesothelial cysts is usually easily feasible. In order to perform complete excision of these cysts a resection of adjacent organs may occasionally be necessary (bowel, spleen, pancreatic tail). Bowel resection is necessary in only 1/3 of adults but it becomes necessary in up to 50%-60% of children with mesenteric cyst[6].

Conclusion

The results of preoperative diagnostic examination of the patient strongly suggested the presence of inflamed mesenteric cyst. The possibility of ectopic (extrapancreatic) pseudocyst of pancreas was ruled out on the basis of negative acute pancreatitis history and relatively normal laboratory findings (except unspecific parameters of inflammation – elevated white blood cells count and CRP). Intraoperatively, the position and size of the cyst corresponded to preoperative radiographic findings

Conflict of interest: We declare no conflict of interest.

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