

**CASE REPORT****SUCCESSFUL ENUCLEATION OF RETROPERITONEAL CYST****Rikki Singal, Samita Gupta\*, Bir Singh**

Department of Surgery, \*Radiodiagnosis and Imaging, Maharishi Markendeshwer Institute of Medical Sciences and Research, Mullana, Haryana, India

Retroperitoneal mesenteric cyst is a rare entity among the other mesenteric cysts and intra-abdominal tumours. A 42-year-old woman reported with pain abdomen off and on since one month. There were no other complaints. On ultrasonography a mesenteric cyst was diagnosed. Surgery was planned which revealed a retroperitoneal mesenteric cyst. Enucleation of the cyst was done. In follow-up of 6 months patient is asymptomatic. We are reporting a rarely reported retroperitoneal mesenteric cyst in the mesentery of the descending colon or sigmoid.

**Keywords:** intra-abdominal, colon, retroperitoneal cyst, enucleation, management

**INTRODUCTION**

Retroperitoneal cysts are believed to be benign tumours of retro-peritoneum. They often attain large proportions before causing any symptoms. These rare tumours are derived from remnants of embryonal urogenital apparatus which includes tissues of both epithelial and mesothelial origin. Mesenteric cysts can occur at any age, and are rare intra-abdominal tumours with prevalence 1:100,000 in adults and 1:20,000 in children.<sup>1</sup> They are usually benign, asymptomatic and found incidentally, although patients may present with lower abdominal pain and symptoms that are frequently associated with other abdominal conditions such as appendicitis and diverticulitis. The most frequent site is the mesentery (60%), followed by the mesocolon (24%) and the retro-peritoneum (14.5%), while it is indefinite in 1.5% of cases.<sup>2</sup> They are asymptomatic, but occasionally they present with varying, non-specific symptoms. Due to the rarity of this entity and the lack of specific symptoms, correct preoperative diagnosis is difficult. Complete surgical excision is the treatment of choice. This can be accomplished by laparotomy or by minimally invasive surgery.<sup>3,4</sup>

**CASE REPORT**

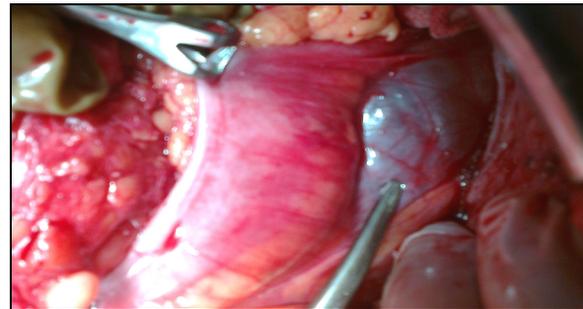
A 42-year-old woman reported with pain abdomen off-and-on since one month. There were no other complaints. There was no history of fever, weight loss, or vomiting etc. Patient's vitals were stable. All routine blood tests were within normal limits. On examination, abdomen was soft, non-tender, and without any organomegaly. Ultrasonography of the abdomen revealed a mesenteric cystic mass of 10×8 Cm size.

Exploratory laparotomy was planned. A midline incision was given. Operative findings revealed a large cyst in retroperitoneal space in left side below the descending colon (Figure-1 a and b). Cyst was brownish in colour and firm in consistency (Figure-2 and 3). Enucleation of the cyst was done easily without any significant blood loss. Primary closure of the retroperitoneal space was done with Vicryl 2/0. Cyst

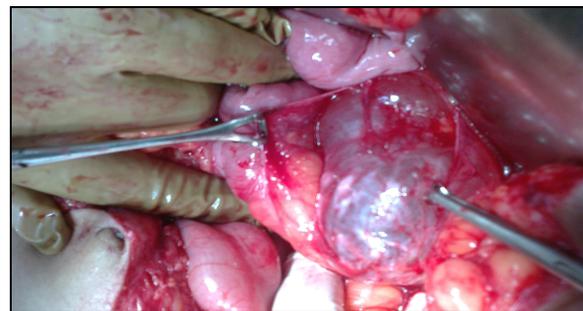
size was approximately of 10×8 Cm and brownish in colour and oval in shape. On histopathology it was diagnosed as lymphatic mesenteric cyst (Figure-4 and 5). In follow-up of 6 months, patient is asymptomatic.



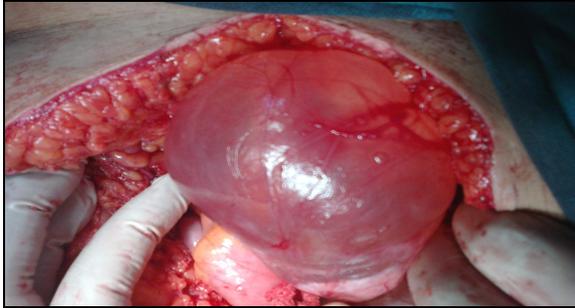
**Figure-1 (a):** Operative picture showing cyst in the mesentery of the descending colon (colon is held with Babcock)



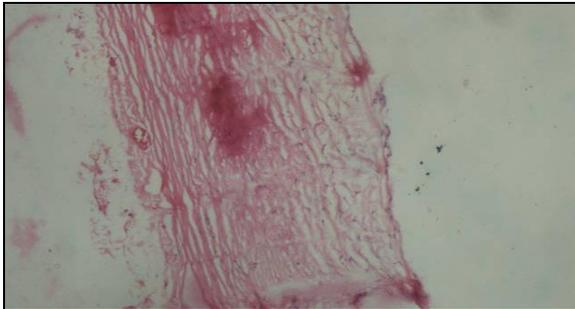
**Figure-1(b):** Operative picture showing cyst in the mesentery of the descending colon



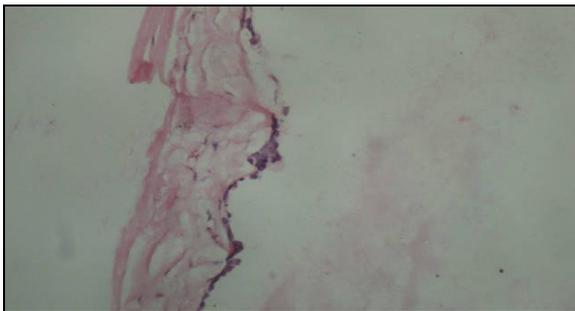
**Figure-2:** Cyst in the mesentery



**Figure-3: Gross appearance of the cyst**



**Figure-4: Photomicrograph showing cyst wall lined by flattened cuboidal epithelium and fibrocollagenous tissue (H&E×100)**



**Figure-5: Photomicrograph showing cyst wall lined by flattened cuboidal epithelium (H&E×200)**

## DISCUSSION

Mesenteric cysts and cystic mesenteric tumours are very rare abdominal growths. They may be localised all over the mesentery, mostly found in the ileum and right colon mesentery, but they can also be found in the descending colon and rectum. There are several classifications of these formations, among which the one based on histopathologic features including 6 groups has been most commonly used: 1) cysts of lymphatic origin—lymphatic (hilar cysts) and lymphangiomas, 2) cysts of mesothelial origin—benign or malignant mesothelial cysts, 3) enteric cysts, 4) cysts of urogenital origin, 5) dermoid cysts, and 6) pseudo-cysts—infected or traumatic aetiology.<sup>5</sup> Their histopathological classification is designated by the cell type of the inner cyst wall layer. Mesenteric cysts can be of lymphatic, mesothelial, enteric, urogenital origin, or non-pancreatic

pseudocysts.<sup>1</sup> The usual location of the cysts is the mesentery of the small intestine. The large bowel is involved only in one third of the cases, usually the right colon. They have reported the first case of the mesenteric cyst of the descending colon and in literature approximately 15 cases have been reported.<sup>6</sup>

A mesenteric cyst, especially lymphatic, should be suspected in the presence of painless abdominal tumour, with occasionally painful abdominal pressure, normal laboratory findings, and good general condition in a female patient. In symptomatic cases, acute or chronic abdominal pain is the most common feature, whereas other symptomatology depends on the localisation, size, and consequential abdominal organ compression (intestinal obstruction, hydronephrosis, lower extremity lymphedema). The term of cystic mesenteric tumour is mostly used to refer to cystic lymphangiomas and lymphatic cysts. In the former, smooth muscle tissue is found, with endothelial lining towards the cavity. The wall of hilar mesenteric cysts does not contain smooth muscle tissue, however, they also show endothelial lining towards the cavity. Exact differentiation between these two entities is necessary for the disease prognosis.<sup>5,7</sup>

The inner wall of a mesenteric cyst has been reported to be composed primarily of columnar or cubic endothelial cells, but the endothelial cell layers are incomplete in some cases. Cases without endothelial cells are classified as false cysts, and their causes have been reported to be trauma, infection or degeneration.<sup>8</sup> The differential diagnosis of abdominal cystic lymphangiomas must include other fluid-filled lesions such as pseudo-cysts, dermoid cysts, enteric duplications, lymphoceles, or neoplasms like mesotheliomas, pancreatic tumours, lipomas, teratomas, leiomyosarcomas, neurofibromas, or liposarcomas.<sup>9</sup>

The preoperative diagnosis may be achieved with the common imaging examinations of the abdomen (ultrasonography, computed tomography, nuclear magnetic resonance). Ultrasonography usually demonstrates a cystic tumour, whose content may form a fluid-fluid level. Computed tomography scans show a cystic mass with a thick wall and a fluid content with a low CT number.<sup>5,10</sup> Abdominal imaging is particularly useful to demonstrate the relation of the tumour to the major abdominal vessels and with the bowel loops, to adequately plan the surgical approach. With the development of U/S and CT, the preoperative diagnosis of abdominal cystic disorder has become easy. Ultrasonology can distinguish between solid and cystic masses and CT can determine extension and cystic content.<sup>2</sup>

The decision regarding the surgical approach depends on the size of the cyst, its location in the abdominal cavity and eventually the surgeon's experience in minimal access surgery. Mesenteric cysts

are usually found within the ileal mesentery and are treated successfully with complete surgical excision. Following surgery, patients' prognosis is excellent and recurrence is low.

## CONCLUSION

Even though mesenteric cysts are rare and usually lack symptoms, they must be kept in mind in cases of non-specific abdominal symptoms. The treatment of choice is complete surgical excision of the cyst. This can be done either by laparotomy or laparoscopy.

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## Address for Correspondence:

**Dr. Rikki Singal**, Dr. Kundan Lal Hospital, Ahmedgarh, District Sangrur, Postcode: 148021, Punjab, India.  
**Cell:** +91-999-6184795  
**Email:** singalsurgery@yahoo.com