ORIGINAL RESEARCH PAPER
Volume - 10 | Issue - 08 | August - 2021 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

MESENTERIC CYST- A RARE CLINICAL PRESENTATION

General Surgery

Dr. Pratik P. Singh* Junior Resident, Department of General Surgery,NKP Salve institute of medical Sciences & LMH, Nagpur . *Correspondig Author

Dr. Manisha Albal Professor, Department of Pediatric Surgery; NKP Salve institute of medical Sciences & LMH, Nagpur.

Dr. Shreyash S. Khot Junior Resident, Department of General surgery; NKP Salve institute of medical Sciences & LMH, Nagpur.

ABSTRACT

Mesenteric cyst is a rare benign intra-abdominal lesion which is usually asymptomatic. Mesenteric cyst mostly involve mesentery of small intestine. It is an incidental finding when patients are undergoing work-up or getting treated for appendicitis, diverticulitis and small-bowel obstruction. Radiological imaging modalities are used for the diagnosis of mesenteric cyst. Surgical excision of cyst is only treatment of choice however in some cases patient may require resection and bowel anastomosis. **Case:** We are presenting a case of 2years male child presenting with chief complaints of, Vomiting since 2days (2 episodes, non-billious).During investigation patient was diagnosed as a case of Mesenteric cyst and surgical excision of the mesenteric cyst was done.

KEYWORDS

Mesenteric cyst, Intra-abdominal lesion , Resection and bowel anastomosis, Surgical excision.

INTRODUCTION:

Mesenteric Cyst was described by Benevieni, an Italian anatomist in 1507 while performing autopsy on an 8-year old boy.[1] Incidence of mesenteric cyst is 1 in 100,000 and the pediatric population with an estimated incidence of 1 in 20,000.Most cases are asymptomatic and discovered incidentally or as a result of its complications.[1] About one-third of the cases occur in children younger than 15 years old, and the mean age-of-onset is 4.9 years.[2]

Mesenteric cysts can occur anywhere in the mesentery of the gastrointestinal tract, from the duodenum to the rectum, and may extend from the base of the mesentery to the retroperitoneum. In a review series of 162 patients, 60% of mesenteric cysts occurred in the small-bowel mesentery, 24% in the large-bowel mesentery, and 14.5% in the retroperitoneum.[3]

Clinical presentation of the mesenteric cyst may alter depending upon the dimension of cyst, their localisation and relation of the cyst to the surrounding structures. Clinical manifestations of the disease are very diverse and variable, and can occur as a spectrum of asymptomatic abdominal cramps and acute intestinal obstruction. When symptomatic, it presents with abdominal pain, and about 10% of the cases are associated with intestinal obstruction, volvulus, or torsion.[1] Radiological investigations like Ultrasonography and Computerizes tomography scan(CT scan) are sufficient for diagnosis and localisation of Intra-abdominal cystic lesion like Mesenteric cyst.[4] Due to rarity of this clinical entity and lack of specific cilinical features the accurate preoperative diagnosis is difficult. Complete surgical excision of cyst is best treatment available.

CASE REPORT:

A 2years old male child was came to out patient department with chief complaints of Vomiting since 2days (2 episodes, non-billious), Not passing stools since 2days with history of fever 4days back.

On examination patient was afebrile with pulse rate of 96/min, respiratory rate of 24/min and saturation on room air is 96%.On per abdomen examination umbilicus was pushed upward, abdomen was soft, nontender with palpable vague lump of size approximately 15x9cm present in lower abdomen involving umbilical region, left iliac region, hypogastric region , right iliac region and right lumbar region(Figure.1,figure.2). Dull note was present during percussion over lump.

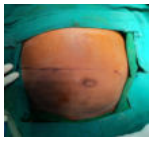
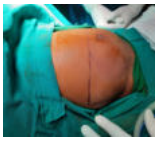
Figure.1 

Figure.2 

Ultrasonography of Abdomen shows a large well- defined cystic lesion of size 12.6x5.2x12 cm (AP x TRANSVERSE x CC) (400cc) is noted extending epigastric region upto pelvic region with multiple septas and internal echoes noted within it with maximum septa thickness of 5mm. The septa shows mild vascularity on color doppler. This lesion is noted along the mesentery of the small bowel. This cyst is causing displacement of bowel loops laterally.

This cyst is inferiorly related to the bladder, posteriorly related to the IVC , aorta and vertebral body suggestive of ?Infected Mesenteric cyst. (Figure.3, Figure.4, Figure.5)

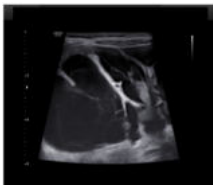


Figure. 3

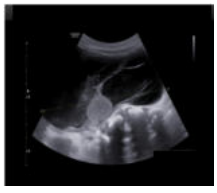


Figure. 4

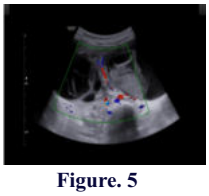


Figure. 5

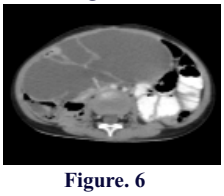


Figure. 6

CECT Abdomen+Pelvis shows a large well-defined thin walled (thickness 2mm), lobulated cystic attenuation lesion of size 11.6x12.7x11.8cm (approx.. vol of 870cc) is noted epicenterd in midline and occupying the lower abdominal cavity involving the right hypochondrium , bilateral iliac region, supraumbilical , umbilical and infraumbilical region arising from the small bowel mesentery extending from inferior border of L1to superior border of S1 vertebrae suggestive of Mesenteric cyst ? Cystic lymphangioma (Figure.6, Figure.7, Figure.8,Figure.9).

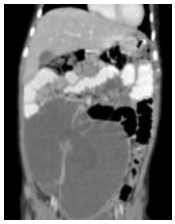


Figure. 7

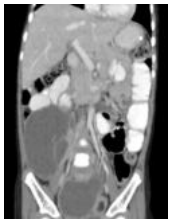


Figure. 8

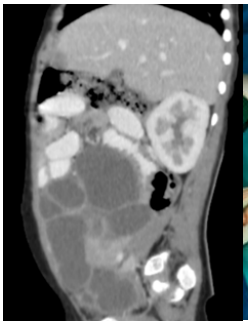


Figure. 9

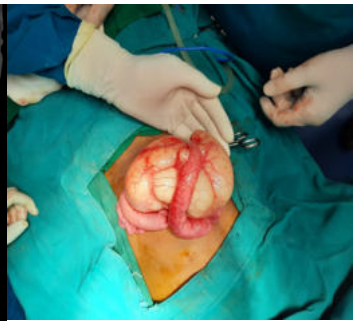


Figure. 10

On surgical exploration the mesenteric cyst of size 18x10cm present over mesenteric border of distal jejunum. Complete surgical removal of mesenteric cyst with resection and anastomosis of involved segment of bowel loop was performed. The excised mesenteric cyst was send for histopathological examination.

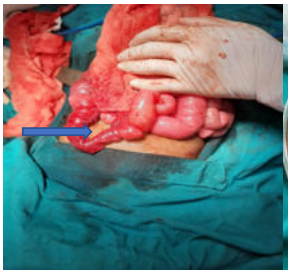


Figure. 11

Arrow showing the defect in the mesentery after removal of the mesenteric cyst.

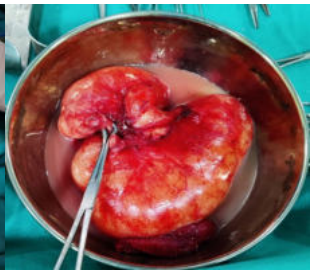


Figure. 12

Excised specimen of mesenteric cyst.

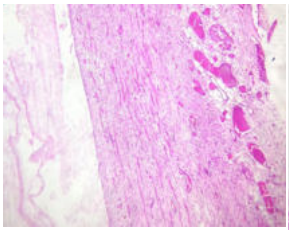


Figure. 11

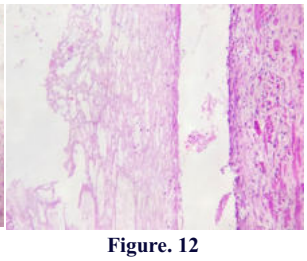


Figure. 12

Histopathological examination shows fibromuscular cyst wall lined by cuboidal to flattened cells. Subepithelial tissue shows mononuclear inflammatory infiltrate. The lumen contains proteinaceous material suggestive of mesenteric cyst (Figure.13 , Figure.14).

DISCUSSUION:

Mesenteric cysts are a group of rare intra-abdominal benign growths occurring in the mesentery of the gut, with reported malignant transformation in about 3%. They can occur anywhere along the length of the intestine, more commonly involving the small intestine (about 60%) than the large intestine. It may also be retroperitoneal.[1] More than half of the cysts are found in the small bowel mesentery, and particularly are seen in the ileum.[2]

Mesentery is fan-shaped fold of peritoneum which attaches jejunum and ileum to posterior abdominal wall. It extends from the left duodenojejunal flexure (left of L2 vertebra) to the right sacroiliac joint, thus fixing the ileocaecal junction there.

Mesenteric cysts could be congenital or acquired. The congenital cases are believed to arise from incomplete fusion of the mesothelium-lined peritoneal surfaces or proliferating ectopic lymphatic tissues lacking communication with the lymphatic drainage system. This may explain the different cyst contents, namely chylous and serous. The acquired cases are believed to be a result of blockage of communication of lymph nodes with the lymphatics and venous system or blockage of drainining lymphatics as a result of trauma, neoplasm, or infection.[1]

According to a large review of the literature by de Perrot et al. [10], pain (82%), nausea and vomiting (45%), constipation (27%), or diarrhoea (6%) were the presenting symptoms while an abdominal mass was the clinical finding in up to 61% of the patients. There were also non-specific symptoms in this case, such as abdominal pain, distension, and vomiting. It is likely that young patients under the age of 10 take less time to show some symptoms compared with patients aged over 10. [5] Complications such as rupture, torsion, or intestinal obstruction rarely occur, which cause more severe symptoms. [5] Mesenteric cyst has a possibility of secondary complications such as haemorrhage , torsion, obstruction, or infection, hence complete excision of cyst with or without bowel resection is the procedure of choice to prevent recurrence or malignant transformation.[5]

Mesenteric cysts may be isolated as single, multiple and unilocular to multilocular, containing serous, chylous and hemorrhage, or combination of these fluids or infectious fluid. [2] In diagnosis and determining nature of mesenteric cysts, ultrasonography (US), computerized tomography (CT) and magnetic resonance imaging (MRI) plays a significant role. Ultrasonography provides contribution in determining cystic nature of lesion, presence or absence of septation and determination of location. However, ultrasonography cannot be sufficient alone in determining localisation in most of the cases. At this point, computerized tomography and magnetic resonance plays significant role. It is sufficient in determining mesenteric localisation of lesion, its relation with environmental structures and defining the projections. Additionally, it is also possible to determine absence or presence of septation, to measure wall thickness. [4]

Mesenteric cysts can be classified into four types: type 1, pedicled cyst e easy to remove; type 2, sessile in leaves of the mesentery e requires bowel resection; type 3, extending into retroperitoneum e often incompletely resected; type 4, multicentric e may require complex surgery, sclerotherapy or both. The treatment standard of mesenteric cyst is excision, which in some cases can require bowel resection. [3] Accurate diagnosis is possible only with histopathological evaluation following the surgery.

[Acknowledgement – Dr. Anne Wilkinson (Associate Professor, Department of Pathology, NKPSIMS) ; Dr. Sadhana Mahore (Professor, Department of Pathology, NKPSIMS) ; Dr. Vidula Govardhan (Lecturer, Department of Pathology NKPSIMS)]

REFERENCES:

1. Menkiti FE, Ukah CO, Ugwu JO. Mesenteric cyst in a 6-years old: A case report and review of literature. Annals of Tropical Pathology. 2019 Jul 1;10(2):163.
2. Rezaee-Azandaryani A, Ghorbanpour M, Taghipour M, Yamini A. A Case Report of a Huge Mesenteric Cyst in a 5- Year-Old Girl: A Rare and Challenging Finding in Radiological Assessment. Adv J Emerg Med. 2020;4(2):e31
3. Marte A, Papparella A, Prezioso M, Cavaiuolo S, Pintozzi L. Mesenteric cyst in 11-year old girl: a technical note. Case report. Journal of Pediatric Surgery Case Reports. 2013 Apr 1;1(4):84-6.
4. Er A, Kaymakcioglu N, Çerci C. Giant abdominal mesenteric cyst. Eur J Gen Med. 2009 Jan 1;6(3):189-93.
5. Yoon JW, Du Young Choi YK, Lee SH, Gang DB, Yu ST. A case of mesenteric cyst in a 4-year-old child with acute abdominal pain. Pediatric gastroenterology, hepatology & nutrition. 2017 Dec;20(4):268.