

# Mesenteric cyst: an acute presentation

Jayanth Leo<sup>1\*</sup>, Maria Antoniette Sharmini<sup>2</sup>, Regina Leo<sup>3</sup>, Naveen Alexander<sup>4</sup>

<sup>1</sup>Consultant Surgeon, <sup>2</sup>Consultant Pediatrician, <sup>3</sup>Director, <sup>4</sup>Consultant, Dr. Regina Nursing Home, Kilpauk, Chennai 600010, Tamil Nadu, INDIA.

Email: [jayanthxl@yahoo.com](mailto:jayanthxl@yahoo.com)

## Abstract

It can be clinically challenging to diagnose a mesenteric cyst due to its diverse mode of presentation and rarity of the condition. Here we report a 15 year old girl who presented with acute pain abdomen and a firm tender lump palpable in the left side of the abdomen. CT imaging showed features suggestive of a teratoma. On exploratory laparotomy we found a large thick walled mass arising from the root of mesentery. The tumor was excised in toto, histopathological examination revealed a benign mesenteric cyst. Complete excision of the cyst is mandatory whenever possible due to fear of malignant transformation and reduces risk of recurrence.

**Key words:** Mesenteric cyst, complication, laparotomy.


## \*Address for Correspondence:

Dr. Jayanth Leo, Consultant Surgeon, Dr. Regina Nursing Home, Kilpauk, Chennai 600010, Tamil Nadu, INDIA.

Email: [jayanthxl@yahoo.com](mailto:jayanthxl@yahoo.com)

Received Date: 02/09/2014 Accepted Date: 12/09/2014

## Access this article online

Quick Response Code:	Website: <a href="http://www.medpulse.in">www.medpulse.in</a>
	DOI: 14 September 2014

## INTRODUCTION

Mesenteric cysts are rare lesions with variable presentation. They are generally benign and commonly seen in children, approximately one third of patients diagnosed are below the age of 15.<sup>1</sup> They are commonly seen in the mesentery of the small bowel, in-between the two mesenteric leaves. CT imaging provides a better idea of the anatomical origin of the cyst as compared to ultrasonography. Complete excision of the cyst is the best form of treatment. The long-term results following complete simple excision of the cyst are good and well tolerated.<sup>2</sup>

## CASE REPORT

A 15 year old girl presented to the outpatient department with complaints of abdominal pain for duration of four days, increased in intensity since two days. She also complains of abdominal fullness along with nausea. She attained menarche 3 years back, with regular cycles. On examination she had tachycardia, her abdomen was soft, there was a vague fullness in the left lower abdomen. A mass measuring 8\*8 cms was palpable in the left lumbar and left iliac fossa, it was firm and tender. CT imaging showed features suggestive of a mature teratoma measuring 9.9\*7.9\*5 cm, possibly of mesenteric or ovarian origin (figure 4). There is also evidence of partial torsion with adjacent fat stranding and inflammatory changes around the cyst. On exploratory laparotomy, through a mid midline incision the abdomen was opened and the mass was identified, the omentum was adherent (figure 1) to it and the origin of the cyst was from the root of the mesentery (figure 2), very close to the ligament of treitz and the doudeno-jejunal flexure. The fourth part of duodenum was adherent to the cyst wall (figure 3), however the bowel was safely dissected from the cyst wall and complete excision of the cyst done. Both the ovaries were normal. She recovered well following surgery and was discharged on the 4<sup>th</sup> postoperative day. Histopathology report suggested a benign mesenteric cyst with cyst wall showing signs of acute inflammation.



Figure 1

Figure 2

Figure 3

**Legend**

**Figure 1:** Tumor with adherent omentum

**Figure 2:** Tumor seen arising from root of mesentery

**Figure 3:** Tumor adherent to the fourth part of duodenum

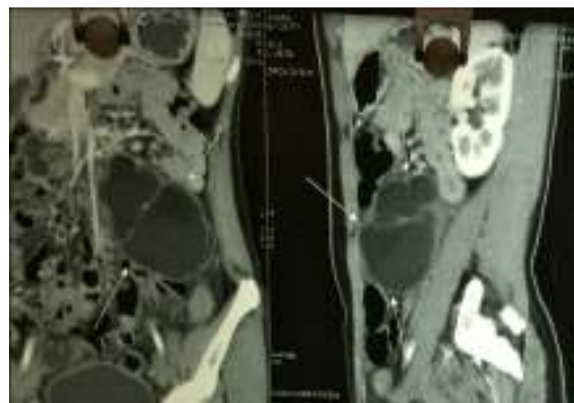


Figure 4: CT image showing the multiloculated cystic lesion

**DISCUSSION**

Mesenteric cysts are rare intra- abdominal tumors commonly occurring in children. The mean age of children affected is 4.9 years.<sup>1</sup> There is a female preponderance with a majority of these lesions being asymptomatic.<sup>3</sup> These cysts may be simple or complex, unilocular or multi locular, most often being multilocular. In a retrospective study of 8 pediatric patients, CT imaging showed a multiloculated cyst in all the patients.<sup>8</sup> It may contain hemorrhagic, serous, chylous, or infected fluid.<sup>4</sup> The symptoms may be acute or chronic depending on the site of origin, size of the tumor and its proximity to vital structures (ureter, bladder, bowel) or may be due to complications of the cyst such as torsion, infarction, intestinal volvulus, perforation, infection, anemia from intracystic hemorrhage in large cysts, intestinal obstruction or obstructive uropathy<sup>3,5,6,10</sup> Our patient presented with acute abdominal pain and a tender mass on palpation, the pain and acute symptoms was suspected to be due to an infected cyst or partial torsion as was also suggested by the CT report. Laparotomy did not reveal any torsion ,however there was evidence of inflammatory adhesions. Usually a precise preoperative diagnosis can be established by proper physical examination, ultrasound

and CT of the abdomen, which can distinguish between solid and cystic components of the mass.<sup>7</sup> Our patient had a multiloculated cyst with solid and cystic components, areas of hemorrhage with internal fluid levels. These features suggested a differential diagnosis of a possible teratoma of mesenteric or ovarian origin. There are different surgical procedures that can be used to treat mesenteric cysts. Marsupialization of cyst or drainage procedures either open or percutaneous carry a high recurrence rate.<sup>8</sup> Complete excision offers the best possible result in terms decreased recurrence rates.<sup>9</sup> The recurrence rate ranges from 0-13.6%, most recurrence being a result of partial excision.<sup>12</sup> Malignant transformation of mesenteric cysts is always a possibility and has occurred in adults<sup>11</sup>, children commonly have a benign disease. Laparoscopic excision have been successfully performed for such cases<sup>13</sup>, but in general laparoscopy is difficult as most of these patients have large cyst making dissection<sup>14</sup>, further excision and retrieval difficult. Patients presenting with intestinal obstruction either due to mass effect or volvulus secondary to the cyst also pose a difficult situation for the use of laparoscopy when the bowel loops are all dilated. The histopathological diagnosis is necessary to

differentiate simple mesenteric cyst from lymphangiomas. In our case, histopathology confirmed a mesenteric cyst with features suggestive of acute inflammation, which correlates with the clinical picture, CT and intra operative findings.<sup>8</sup>

## CONCLUSION

Mesenteric cyst is a rare entity that requires a high index of clinical suspicion for its diagnosis. Imaging studies give a fare diagnostic guide. Exploration with complete excision of the cyst offers the best long-term result for the patient.

## REFERENCES

1. Bliss DP Jr, Coffin CM, Bower RJ, et al. Mesenteric cysts in children. *Surgery*. May 1994;115(5):571-7.
2. Chang TS, Ricketts R, Abramowksy CR, Cotter BD, Steelman CK, Husain A, et al. Mesenteric cystic masses: a series of 21 pediatric cases and review of the literature. *Fetal Pediatr Pathol*. 2011;30(1):40-4.
3. Huis M1, Balija M, Lez C, Szerda F, Stulhofer M. Mesenteric cysts *Acta Med Croatica*. 2002;56(3):119-24
4. Egozi EI, Ricketts RR. Mesenteric and omental cysts in children. *Am Surg*. Mar 1997;63(3):287-90.
5. Gourtsoyiannis NC, Bays D, Malamas M, Mouchtouris A. Mesothelial cyst complicated by torsion: preoperative imaging evaluation. *Hepatogastroenterology* 1993; 40:509-12.
6. Vlazakis SS, Gardikis S, Sanidas E, Vlachakis I, Charissis G. Rupture of mesenteric cyst after blunt abdominal trauma. *Eur J Surg* 2000; 166:262-4.
7. Dragoslav Miljković, Dragojlo Gmijović, Milan Radojković, Jasmina Gligorijević, Zoran Radovanović Mesenteric cyst *Arch Oncol* 2007;15(3-4):91-3.
8. Kamal Nayan Rattan, Vimoj J Nair, Manish Pathak, Sanjay Kumar Pediatric chylolymphatic mesenteric cyst - a separate entity from cystic lymphangioma: a case series *Journal of Medical Case Reports* 2009, 3:111 doi:10.1186/1752-1947-3-111
9. L Pantanowitz, M Botero. Giant Mesenteric Cyst: A Case Report And Review Of The Literature. *The Internet Journal of Pathology*. 2000 Volume 1 Number 2.
10. Ozdogan M. Acute abdomen caused by a ruptured spontaneously infected mesenteric cyst. *Turk J Gastroenterol*. 2004;15(2):120-1.
11. Kurtz RJ, Heimann TM, Holt J, Beck AR. Mesenteric and retroperitoneal cysts. *Ann Surg*. Jan 1986;203(1):109-12
12. Bliss DP Jr, Coffin CM, Bower RJ, et al. Mesenteric cysts in children. *Surgery*. May 1994;115(5):571-7.
13. Kwan E, Hung L, Wai-Key Y. Laparoscopic resection of a mesenteric cyst. *Gastrointestinal Endoscopy*. 2004; 59(1): 154-156.
14. Raghupathy RK, Krishnamurthy P, Rajamani G, Babuji N, Diriviraj R, Mohan NV, Swamy RN, Gurunathan S, Natarajan M: Intraabdominal cystic swelling in children - laparoscopic approach, our experience *J Indian Assoc Pediatr Surg* 2003, 8:213-217.

Source of Support: None Declared  
Conflict of Interest: None Declared