Pacific Journal of Medical and Health Sciences
ISSN: 2456-7450 | Vol.3, No. 3, 2021, pp-19-21

PJMHS
PACIFIC JOURNAL OF MEDICAL AND HEALTH SCIENCES

Case Report

Malrotation with Midgut Volvulus with Mesentric Cyst in A Neonate – Rarest of Rare Presentation

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ABSTRACT

As a dictum it is said that bilious vomiting in a new born until proven otherwise is a case of malrotation.1 Intestine malrotation is commonly associated with duodenal atresia, abdominal wall defects or diaphragmatic hernia. Other than this malrotation is also described in combination with hundreds of syndromes but its association with mesenteric cyst is rarely described in literature.2,3 Approximately one-third of mesenteric cysts usually occur in children younger than 15 years of age and are slightly more common in males.4 Mesenteric cyst in female is rare presentation.4 We report a 28-days-old, full-term female baby with atypical presentation of malrotation with midgut volvulus and associated mesenteric cyst.

KEYWORDS: Mesenteric cyst, Malrotation with midgut volvulus, Bilious vomiting

CASE PRESENTATION

A 28 days old female baby was brought for multiple (six) episodes of vomiting since one day. Vomiting was projectile and bilious. Baby was admitted in ICU after primary stabilization. On taking history, it was found that the baby was full term, delivered normally at hospital, cried immediately after birth and did not require NICU admission. Antenatal scan of mother was normal. Clinical examination of baby on presentation revealed upper abdomen fullness with palpable mass in umbilical region. Abdomen ultrasonography was done, suggestive of "Over distended stomach; with positive whirlpool sign indicating malrotation with midgut volvulus. Fairly large lobulated cystic lesion 38x34mm in pelvis extending up to left side probably complex ovarian cyst." All the other routine investigations were done and baby was planned for emergency laparotomy. However, Intraoperative findings were totally surprising. [Figure 1] There was midgut volvulus with two and half turn; mesenteric shortening and that lobulated lump was mesenteric cyst in jejunal area. There was approximately 6x4x2cm sized cyst in jejunal mesentery, which was about 6cm away from duodeno-jejunal junction showing blood supply with corresponding segment. Thus, Ladd's procedure was done, straightening of

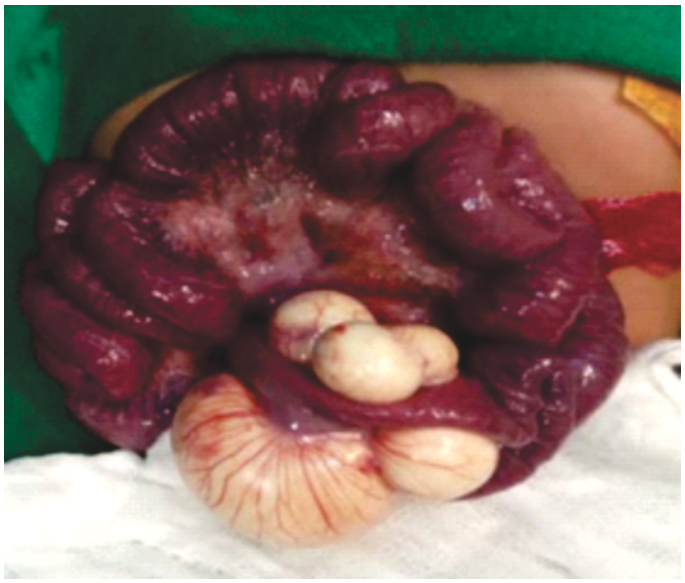

Figure 1: Intra-operative Finding (Mesenteric Cyst in Jejunal Area)

Figure 2: Excised Jejunal Part with Mesenteric Cyst

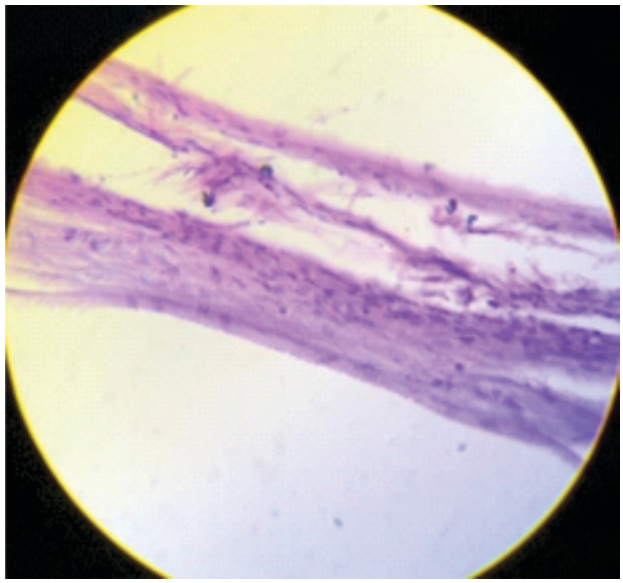

Figure 3: Histological Image Showing Endothelial Cell Layer, Lacking Muscular Lining

duodenum and mesenteric widening done, followed by excision of cyst along with 5cm of jejunum [Figure 2] end to end jejuno-jenunal anastomosis was done with using vicryl 5-0 suture. Post- operatively baby recovered well and was accepting feed orally. Baby was on regular follow-up since then. No recurrence was noticed in the follow-up period. Excised cyst was sent for histopathology evaluation which later confirmed the findings of "Chylolymphatic Mesenteric Cyst." [Figure 3]

DISCUSSION

Benivieni, an anatomist, was the first who reported the mesenteric cyst in 1507.[4] Mesenteric cysts are rare intra-abdominal masses with an incidence of approximately 1:100,000 in adults and 1:20,000 in the paediatric population.[4] They may occur anywhere in the mesentery of the gastrointestinal tract from the duodenum to the rectum, but they are most commonly located in the mesentery of the ileum followed by localization in the sigmoid mesocolon.[4,5] The size of mesenteric cysts may vary widely, ranging from 2 cm to 35 cm.[6] The exact aetiology of the development of mesenteric cysts is unknown. The most commonly accepted theory as proposed by Gross states that cysts result from benign proliferation of ectopic lymphatic tissue in the mesentery that lacks communication with the remainder of the lymphatic system.[4] Mesenteric cysts usually present as an asymptomatic lump. Acute presentations are uncommon. It is thus the absence of obvious pathognomic symptoms and signs that make the diagnosis of cyst difficult.[4] Patients are usually asymptomatic unless complications arise. Symptoms are a lot variable and are mainly related to the size and the position of the cyst, with usually no pathognomonic signs in uncomplicated patients. Patients may also present with acute symptoms which are

secondary to complications such as obstruction, rupture, haemorrhage into a cyst, infection, or abscess formation. Intestinal obstruction is a surgical emergency and requires urgent attention. It is usually produced by compression of the intestine adjacent to the cyst, volvulus or entrapment in the pelvis.[7] Abdominal ultrasound and computed tomography may aid in diagnosis. Complete surgical excision is the treatment of choice; the alternative treatment being excision or marsupialization of the cyst.[4]

CONCLUSION

As it is said that abdomen is a Pandora's Box, even after high end radiological investigations as a surgeon we should always be prepared for any surprising finding like in this case and management should be done accordingly. We know that mesenteric cyst in a neonate is rare and even rarest in female child. Our case was different as presentation was typically of volvulus with intestinal obstruction in female baby.

SOURCE OF FUNDING: None

CONFLICTS OF INTEREST: None

REFERENCES

1. Valentini V, Piccolo C.L., Maria Napoletano,Mamone R., ZeccoliniM., Miele V. (2016) Intestinal Malrotation and Volvulus.In: Miele V., Trinci M. (eds) Imaging Non-traumatic Abdominal Emergencies in Pediatric Patients. Springer, Cham. 10 November 2016. Pp31-43.
2. Forrester MB, Merz RD. Epidemiology of intestinal malrotation, Hawaii, 1986-99. Paediatr Perinat Epidemiol. 2003 Apr; 17(2): 195-200. [pubmed]
3. Spigland N, Brandt ML, Yazbeck S. Malrotation presenting beyond the neonatal period. J Pediatr Surg. 1990 Nov; 25(11): 1139-42. [pubmed]
4. Ricketts RR. Mesenteric and omental cysts. In: Grosfeld Jay L, O'Neill JA, Fonkalsrud EW, Coran AG, Caldamone AA, editors. Pediatric surgery, vol. II. Mosby Inc.; 2006. p. 1399-406 [Chapter 89].
5. Deepa Makhija, Hemanshi Shah, Charu Tiwari, Shalika Jayaswal, Kiran Khedkar, Mukta Waghmare. "Mesenteric cyst(s) presenting as acute intestinal obstruction in children: Three cases and literature review", International Journal of Pediatrics and Adolescent Medicine, 2016Sep;3(3):109-111.
6. Tan JJ, Tan KK, Chew SP. Mesenteric cysts: an institution experience over 14 years and review of literature. World J Surg 2009;33:1961-5.
7. Wani B, Jajoo S, Golhar K, Bhole A. Mesenteric cyst causing acute intestinal obstruction: a rare occurrence. Trop Gastroenterol 2011;32(3):246-8