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Mesenteric Lymphangioma Presenting as Ileal Volvulus

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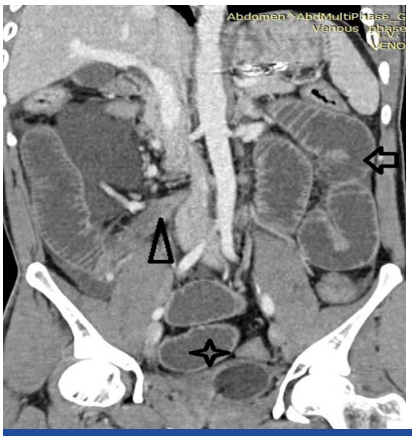
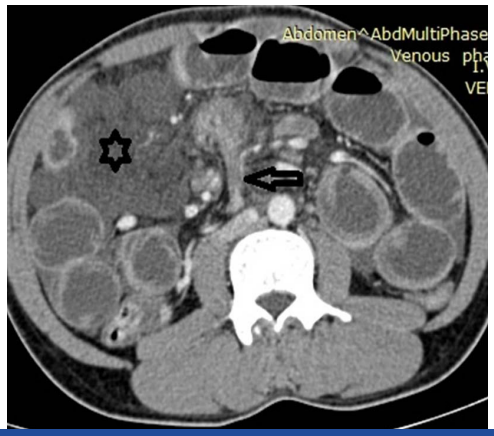
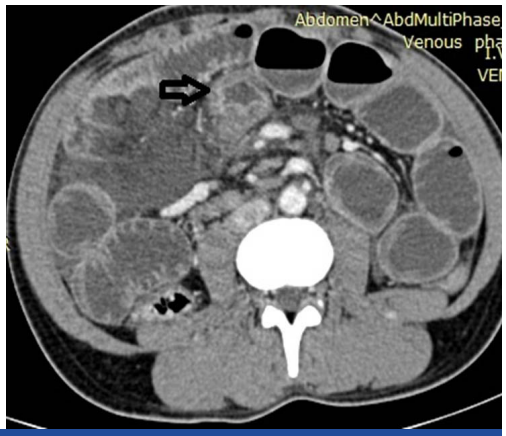
Lymphangioma are congenital malformation of lymphatic vessels and 95% of these involve neck and axillary regions. The abdominal cystic lymphangioma is rare tumour of abdomen. The small bowel mesentery is most commonly involved. Most of the patient present with acute symptoms. We describe an atypical case of an abdominal cystic lymphangioma associated with ileal volvulus subsequent intestinal obstruction presenting at casualty level that underwent surgical intervention.

A 38-year-male patient presented to our casualty with symptoms of intestinal obstruction like distension of abdomen, 8 episodes of vomiting and pain abdomen since 4 days. At casualty level BP= 110/76 mmHg and respiratory rate 29 cycles per minute were recorded.

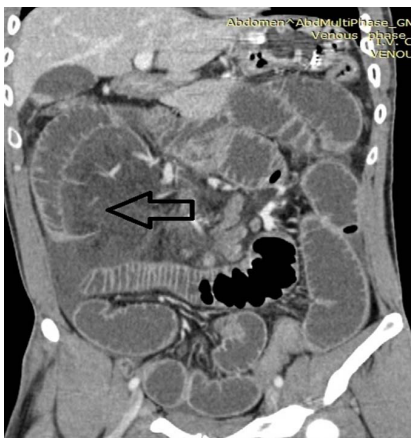
On ultrasound abdomen there were dilated small bowel loops which were fluid filled, largest measuring 3.4 cm in diameter. Other findings like minimal free fluid in the pelvis and abdomen with cystic mass lesion in the right lumbar region not showing colour flow within and mesenteric lymphadenopathy. Subsequently contrast enhanced CT (computer tomography) scan of the abdomen was performed to see the transition zone and characterise the cystic mass lesion associated with intestinal obstruction. It revealed dilated jejunal and ileal loops [Table/Fig-1], which were fluid filled with transition zone near the terminal ileum [Table/Fig-1,2]. There was abrupt luminal narrowing with segment of mural thickening [Table/Fig-3] and stratification coupled with prominent converging mesenteric vessels [Table/Fig-4] suggesting volvulus. Other findings were non Enhancing multicystic lesion along the mesenteric border of the bowel loops in the right lumbar region [Table/Fig-5]. Other findings like mesenteric lymphadenopathy, ascitis [Table/Fig-6] and cholelithiasis. After compiling these imaging findings we gave the diagnosis of mesenteric lymphangioma presenting as ileal volvulus resulting to small bowel obstruction with reactionary ascitis.

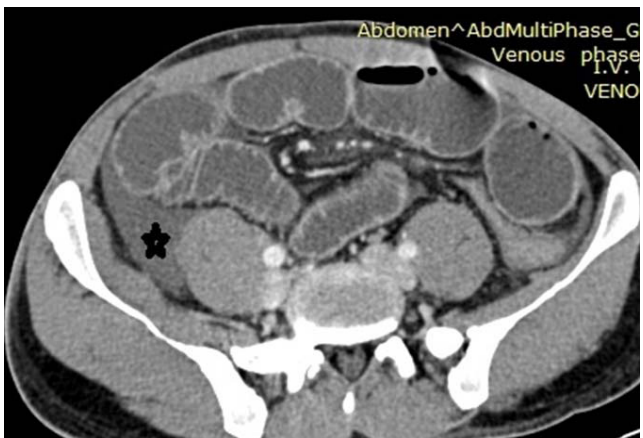






[Table/Fig-1]: A 38-year-old male with mesenteric lymphangioma with ileal volvulus. Multidetector Contrast CT scan at Venous phase. Coronal view showing dilated jejunal (left arrow), ileal loops (four point star) and transition zone(triangle). **[Table/Fig-2]:** A 38-year-old male with mesenteric lymphangioma with ileal volvulus. Multidetector Contrast CT scan at Venous phase. Axial view showing transitional zone (arrow) and cystic mass lesion (five point star).**[Table/Fig-3]:** A 38-year-old male with mesenteric lymphangioma with ileal volvulus. Multidetector Contrast CT scan at Venous phase. Axial view showing mural thickening with stratification (right arrow).





[Table/Fig-4]: A 38-year-old male with mesent-eric lymphangioma with ileal volvulus. Multidetector Contrast CT scan at Venous phase. Coronal view showing twisting of mesentery (right arrow). **[Table/Fig-5]:** A 38-year-old male with mesenteric lymphangioma with ileal volvulus. Multidetector Contrast CT scan at Venous phase. Coronal view showing non enhancing cystic mass along the mesenteric border of small bowel (right arrow). **[Table/Fig-6]:** A 38-year-old male with mesenteric lymphangioma with ileal volvulus. Multidetector Contrast CT scan at Venous phase. Axial view showing free fluid in the abdomen (five point star).

The patient underwent emergency laparotomy with abdominal exploration. There was ileal volvulus with terminal lleal loop been seen to twist and stretch over the mesentery. The mesentery was edematous however there was no evidence of gangrenous change of the bowel loops. The tumour was seen to involve the mesentery and adjacent bowel wall as well. The other abdominal structures and remaining bowel loops appeared normal. Resection of the tumour in toto and adjacent involved ileal loop was done. Histopathological examination showed a multicystic mesenteric lesion with dilated lymphatic vessels, thus, confirming the diagnosis of a mesenteric lymphangioma.

Cystic lymphangioma involving the abdomen is rare entity with incidence of less than one per 100,000 in hospital admission. It's predominantly seen in the childhood with male predominance. It is different from the mesenteric cyst as it follows proliferative and invasive process. Mesentery is the most commonly involved structure in abdominal lymphangioma followed by mesocolon, retroperitonium and omentum [1]. The common presenting symptom is pain abdomen followed by abdominal distension and mass per abdomen. These can cause complications like intestinal obstruction, volvulus and infarction. In our case there was intestinal obstruction due to ileal volvulus.

Ultrasound is first investigation of choice, which has high specificity and sensitivity for all cystic lesions. However the efficacy for detecting the origin of the lesion is low if it's large mass. The differential diagnosis of cystic lesion in the abdomen includes pancreatic and non pancreatic pseudocyst, duplication cyst, mesothelial cyst, enteric cyst and lymphangioma.

The imaging features of mesenteric lymphangioma in CT are multiloculated cystic mass having homogenous fluid density. In presence of chyle negative attenuation values can occur. Calcification can occur but is rare [2]. With use of multiplanar reconstructed images it is easy to diagnose the location of lesion and its complication such as intestinal obstruction and volvulus.

MRI features of mesenteric lymphangioma are similar to the lesion having fluid intensity with hypointesity on T1 and hyperintensiy on T2 weighted images with internal septae [3]. The signal intensity can be altered in case of intra-tumoural haemorrhage. As lymphangioma has insuating in nature it is important to locate its anatomical origin accurately before the operation.

REFERENCES

[1] Prabhakaran K, Patankar JZ, Loh DLSK, et al. Cystic lymphangioma of the Mesentery causing intestinal obstruction. *Singapore Med J*. 2007;48:E265-67.
[2] Okur H, Kucukaydin M, Ozokutan BH, Durak AC, Kazez A, Ozkan K. Mesentric, omental and retroperitoneal cysts in children. *Eur J Surg*. 1997;163:673-77.
[3] Chen CW, Hsu SD, Lin CH, Cheng MF, Yu JC. Cystic lymphangioma of the jejunal mesentery in an adult: a case report. *World J Gastroenterol*. 2005;11:5084-86.

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