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**General Surgery** 



## ACUTE SMALL INTESTINAL OBSTRUCTION AS AN INITIAL PRESENTATION OF MESENTERIC VENOUS THROMBOSIS- CASE REPORT

Dr. Sunil Kumar Negi	General Surgeon, Regional Hospital , Reckong Peo, Distt. Kinnaur, H.P.
Dr. D. K Verma	Professor, Deptt. of General Surgery IGMC Shimla.
Dr. Vikram	Senior Resident, Deptt. of General Surgery IGMC Shimla.
Dr. Cliffin Mathai Kattor*	Junior Resident, Deptt. of General Surgery IGMC Shimla. *Corresponding Author
ABSTRACT Intestinal ischemia commonly occurs after arterial thrombosis or embolism. Thrombosis of the mesenteric	

ABSTRACT vein accounts for less than 10% of cases of intestinal ischemia. Intestinal obstruction due to mesenteric venous thrombosis is rare, and so far, only 13 cases have been reported. The majority of them had a distinct episode of acute abdominal pain due to ischemia and later developed intestinal obstruction. Here we report a case of a 53-year-old female who presented with intestinal obstruction as an initial presentation of superior mesenteric vein thrombosis.

# KEYWORDS : MVT, SMV, PV, CECT ABDOMEN.

## INTRODUCTION

Mesenteric venous thrombosis (MVT) is a rare condition accounting for 1 in 5000 to 15,000 inpatient admissions, 1 in 1000 emergency department admissions, and 6% to 9% of all cases of acute mesenteric ischemia  $^{\scriptscriptstyle 1-3}$  . MVT is an increasingly recognized cause of mesenteric ischemia in adults. The usual presentation is abdominal pain out of proportion to abdominal signs. In its severe form, it may lead to perforation peritonitis. The presentation is non specific and diagnosis requires a high index of suspicion. Computed tomography (CT) angiography showing venous filling defects or a lack of flow in mesenteric veins during the venous phase is considered the gold standard for diagnosis. Initial management is conservative and includes intravenous fluids, bowel rest, anticoagulation and bowel decompression. Surgery is indicated for complications such as bowel infarction or perforation. Early diagnosis and treatment are crucial to prevent complications.

### **CASE REPORT**

A 53 yrs old female presented to emergency department with abdominal pain , and distention , bilious vomiting and non passage of flatus and stool for last 3 days. Her past medical history was unremarkable. She was afebrile , pulse rate of 90 per minute, blood pressure of 100\70 mm Hg. Abdominal examination showed distended gaseous abdomen with mild diffuse tenderness with increased bowel sounds. Laboratory investigation was within normal limit. X ray abdomen erect and supine revealed dilated small bowel loops with multiple air-fluid levels.[Fig.1]



Fig. 1- x- ray abdomen erect and supine showing dilated small bowel loops with multiple air-fluid levels.

Contrast enhanced (CE) CT abdomen showed long segment thickening of walls of distal jejuna and ileal loops with dilated distal jejuna loops with marked mesentric stranding, gross ascites and engorged vasa rectae with thrombosis of right, left and main branch of portal vein(PV), superior mesenteric vein (SMV) and splenic vein finding suggestive of mesenteric venous ischemia with intestinal obstruction. [Fig. 2,3]



Fig.2- CECT film showing superior mesentic vein thrombosis marked with blue circle.



Fig.3- CECT film showing portal vein thrombosis marked with red circle.



Fig.4- CECT abdomen coronal and sagittal section showing dilated small bowel loops( red arrow) with mesenteric fat stranding (green arrow) with large intra- abdominal fluid (yellow arrow).



Fig. 5.Intraoperative showing dilated small gut loops.

Patient was initially managed conservatively with intravenous fluid, bowel rest, bowel decompression with ryle tube aspiration and started on injection low molecular heparin. But patient failed to respond to conservative management. Subsequent CECT abdomen done and it showed dilated ileal and jejunal bowel loops with few of the ileal loops showing thinned and imperceptible walls ? gangrenous with pelvic and lower abdominal collection with air foci within it ? due to focal perforation. [Fig.4] Patient underwent emergency laparotomy. Intraoperatively, there was gross fecal contamination in peritoneal cavity. A gangrenous segment of ileal loops approx. 100 cm in length , 10 cm from ileoceacal junction with line of demarcation. Resection of gangrenous segment done. Proximal jejunostomy and distal ileostomy done. (Fig. 5,6). Postoperative period was uneventful. Patient was started on oral liquid diet and gradually accelerated to solid diet. She was started on oral anticoagulant.

## DISCUSSION

MVT is an uncommon cause of mesenteric ischemia that was first reported in 1895<sup>4</sup>. It accounts for fewer than 10% of cases of intestinal ischemia<sup>5</sup>. It has been increasingly recognized with the widespread use of cross-sectional imaging<sup>6</sup>. Clinical manifestations of MVT are variable. The usual course of MVT is insidious compared with the rapid course of mesenteric arterial occlusion. MVT can be categorized into an acute, subacute and chronic form based on thrombus formation rapidity<sup>7</sup>. As the presenting symptoms, signs and laboratory testing are nonspecific, a high index of suspicion is necessory to avoid a delay in diagnosis.

MVT has better prognosis compared to other causes of mesenteric ischemia<sup>8</sup>.

MVT usually involves the SMV and rarely involves the inferior mesenteric or portal veins. CT angiography showing filling defects or a lack of flow in mesenteric veins during the venous phase, is considered the diagnostic modality of choice<sup>9</sup>. Once the diagnosis is made, it is important to look for predisposing factors such as local intra-abdominal inflammatory processes and prothrombotic states<sup>10</sup>.

In the absence of local inflammatory causes, an etiological workup for mesenteric vascular thrombosis has paramount importance. Inherited thrombophilic states are the common causes for isolated MVT<sup>5</sup>. The management goals in MVT are to prevent bowel infarction, perforation peritonitis, and recurrence of the disease. Anticoagulation therapy early in the course of the disease plays a cardinal role. In acute MVT, emergency surgery is indicated in bowel gangrene and perforation peritonitis, whereas in chronic MVT, surgery is required in patients with intestinal stricture and obstruction. In the presence of inherited thrombophilia, patients require lifelong anticoagulation to avoid further complications.

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#### CONCLUSION

A high index of suspicion is required for early diagnosis and management of mesenteric vascular thrombosis. Etiological workup and early anticoagulant therapy are crucial to avoid postoperative recurrence.

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#### REFFERENCES

- Rhee RY, Gloviczki P. Mesenteric venous thrombosis. Surg Clin North Am. 1997; 77(2):327-338.
- Brunaud L, Antunes L, Collinet-Adler S, et al. Acute mesenteric venous thrombosis: case for nonoperative management. J Vasc Surg. 2001;34(4):673-679.
- Harnik IG, Brandt LJ. Mesenteric venous thrombosis. Vasc Med. 2010; 15(5): 407-418.
- ElliotJW II. The operative relief of gangrene of intestine due to occlusion of the mesenteric vessels. Ann Surg. 1895;21(1):9–23.
  Singal AK, Kamath PS, Tefferi A: Mesenteric venous thrombosis. Mayo Clin
- Singal AK, Kamath PS, Tefferi A: Mesenteric venous thrombosis. Mayo Clin Proc. 2013, 88:285-94.10.1016/j.mayocp.2013.01.012
  Kumar S, Sarr MG, Kamath PS. Mesenteric venous thrombosis. N Engl J Med.
- Kumar S, Sarr MG, Kamath PS. Mesenteric venous thrombosis. N Engl J Med. 2001; 345(23):1683–8.
  Harnik IG, Brandt LI. Mesenteric venous thrombosis. Vasc Med. 2010: 15(5):
- Harnik IG, Brandt LJ. Mesenteric venous thrombosis. Vasc Med. 2010; 15(5): 407–18.
- Singal AK, Kamath PS, Tefferi A. Mesenteric venous thrombosis. Mayo Clin Proc. 2013;88(3):285–94.
- Morasch MD, Ebaugh JL, Chiou AC, Matsumura JS, Pearce WH, Yao JS. Mesenteric venous thrombosis: A changing clinical entity. J Vasc Surg. 2001; 34(4): 680–4.
- Acosta-Merida MA, Marchena-Gomez J, Hemmersbach-Miller M, Conde-Martel A, Hernandez-Romero JM. Mesenteric venous thrombosis: Associated systemic disorders and hypercogulability status of 21 surgical patients. Hepatogastroenterology. 2007;54(76):1080–4.