

Mesenteric venous thrombosis presenting as recurrent small bowel obstruction – a difficult diagnosis and an unusual aetiology

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Introduction

Mesenteric venous thrombosis (MVT) accounts for 5%–15% of acute mesenteric ischemia [1]. Its presentation is atypical and non-specific, and diagnosis requires a high degree of suspicion. We discuss a middle-aged male with no identifiable risk factors presenting with recurrent episodes of subacute and acute intestinal obstruction who was subsequently found to have MVT on CT imaging. Mesenteric vein thrombosis is a salient differential to be considered if a patient presents recurrently with non specific abdominal symptoms. Acute diagnosis may avoid a negative laparotomy and timely anticoagulation can improve outcomes.

Case Presentation

A 54-year-old male, previously well man presented with recurrent episodes of subacute small bowel intestinal obstruction over a 4-month period.

His initial presentation was colicky abdominal pain and bilious vomiting lasting for 5 days. Examination revealed a distended yet aperitoneal abdomen with sluggish bowel sounds. Laboratory tests demonstrated mild leucocytosis, marginally high lactate, and normal serum amylase levels. He was managed conservatively. Over the next 4 months, he experienced multiple episodes of acute and subacute intestinal obstruction.

Upper and lower gastrointestinal endoscopy demonstrated bile reflux with gastritis and 2nd-degree haemorrhoids. A contrast CT abdomen demonstrated thickened bowel walls and evidence of early chronic liver disease without portal hypertension. A partial infrarenal IVC thrombus was noted and was referred for a possible missed deep vein thrombosis. On subsequent review of the images, there was evidence of not only caval recanalization but also defective canalization

of the superior mesenteric vein extending towards the portal vein. The splenic vein could not be demonstrated and was instead replaced with a clump of varices (Figure 1).

There were no demonstrable risk factors for thrombophilia or undiagnosed malignancy in the history or investigations. He was started on anticoagulation and remains asymptomatic to date. Therapeutic anticoagulation for a minimum of 6-month period was planned, with consideration for continuing beyond 6 months to be evaluated at that point through a multidisciplinary meeting. Furthermore, it was planned to conduct the thrombophilia screening in 3–6 months, as per the advice of the haematologists. The follow-up was scheduled for a minimum of two years. Initially, at three monthly intervals in the first year

Discussion


Mesenteric venous thrombosis (MVT) is a rare, potentially life-threatening condition that should be considered in the differential diagnosis of recurrent intestinal obstructive symptoms. The difficulty lies in the varied clinical presentation and the non-specific nature of the condition. It predominantly involves the superior mesenteric venous territory (95%), with extension to the portal vein seen in 30% of such patients. It less commonly involves the colon (inferior mesenteric venous territory, 4%–6%) [2]. The Incidence of MVT has increased over the last few decades to around 2.7 per 100,000 [3], primarily due to the amplified use of computer tomography in clinical practice. Patients are usually middle-aged (45–60 years) with a slight male predominance.

The clinical presentation of MVT can be acute, sub-acute, or chronic. Thrombosis leads to increased venous pressure in the mesenteric venous bed, causing bowel wall oedema and sub mucosal haemorrhage. Bowel infarction can occur in the acute setting and is associated with mortality ranging from 20–50% [4]. Sub acute and chronic MVT result in the development of collaterals; therefore, diagnosis is often delayed, as in our case, owing to non-specific and varied symptomatology.

Even though CECT is the most commonly used diagnostic imaging tool for MVT, it is often challenging to interpret

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images in the presence of bowel oedema. Defective canalization is difficult to diagnose in this setting unless it is specifically looked for. The diagnosis was delayed further since the patient did not have any antecedent risk factors for a prothrombotic state.

Surgical exploration is restricted to patients with signs of bowel infarction. Anticoagulation is recommended in acute and sub acute MVT as it limits the propagation of thrombus and allows for recanalization and resolution of symptoms.

MVT has a better prognosis than other forms of acute mesenteric ischemia. The mortality rates are 44% for MVT, compared with 66–89% for patients with acute arterial or non-occlusive mesenteric ischemia [4, 5]. Unlike other forms of acute mesenteric ischemia, improved morbidity and mortality rates can be achieved in MVT by anticoagulation rather than operative management. Provided that a clear decision can be made that the bowel infarction has not led to transmural necrosis or bowel perforation. Laparotomy in this instance leads to extended bowel resections (purely based on macroscopic appearance) without transmural necrosis, which is potentially reversible with anticoagulation alone.

In conclusion, the diagnosis of MVT often requires a high degree of suspicion due to its varied and nonspecific symptoms. However, recognizing MVT as a differential diagnosis is essential for an early diagnosis and favourable outcomes. The use of a multidisciplinary team in the management of an unusual or atypical presentation was useful in establishing the diagnosis of sub acute MVT and a favourable patient outcome.

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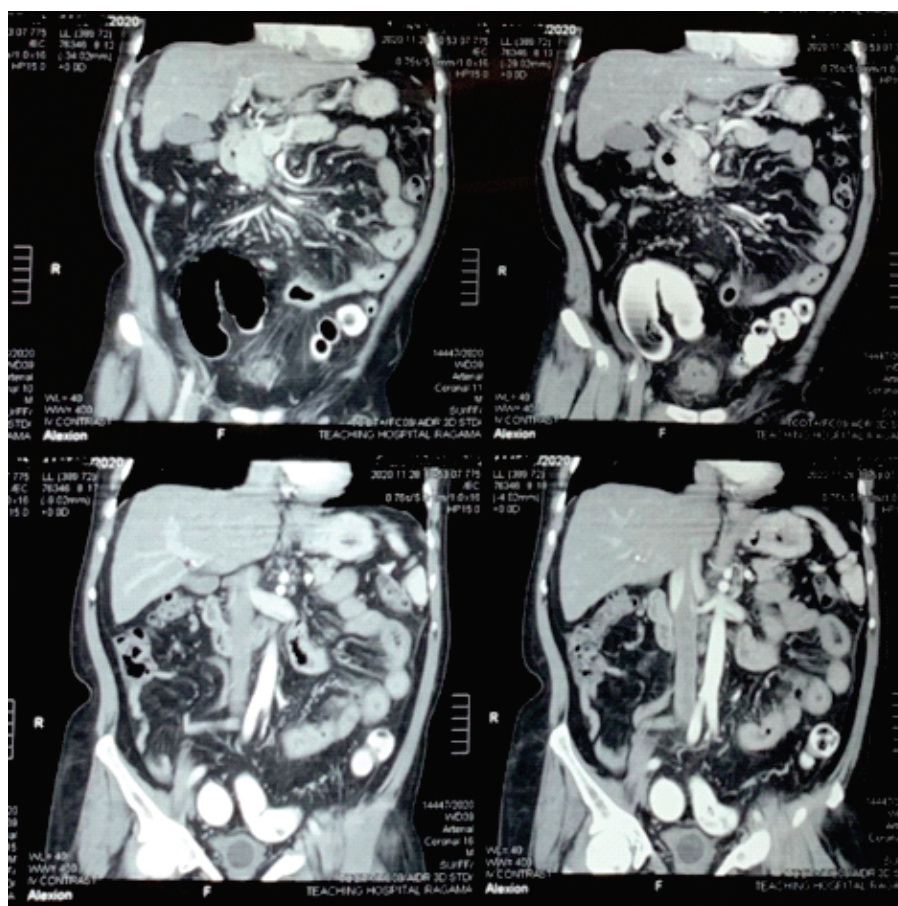


Figure 1. Contrast Enhanced computed tomography of abdomen sagittal and coronal views

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Learning Points:

- Mesenteric venous thrombosis is a rare cause of abdominal pain.
- History and examination may not be helpful and require a high degree of suspicion.
- CECT is the most commonly used diagnostic modality, and it can be challenging too.
- In cases without bowel infarction, anticoagulation is the recommended treatment option.