



# Acute Occlusive Mesenteric Ischemia from Venous and Arterial Thrombosis in a Patient with Hyperhomocysteinemia and Liver Cirrhosis



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## Introduction

**Portal vein thrombosis (PVT)** is a severe complication of liver cirrhosis and one of its major consequences include intestinal ischemia.

Hyperhomocysteinemia (HHcy) has been suggested to be an independent risk factor for deep venous thrombosis, but limited data are available on the prevalence of HHcy in patients with PVT complicating liver cirrhosis.

Several clinical studies have also demonstrated the role of HHcy in arterial and venous thrombosis.

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## Case Report

We report a case of a 57 year old male with Liver Cirrhosis from Alcoholic Liver Disease, who presented at our ED with a two week history of dull periumbilical pain which worsened on the day of consult.

Plain abdominal CT scan showed nonspecific small bowel enteritis. He was placed on general liquid diet and started on Ciprofloxacin and Metronidazole intravenously. However, on the third hospital day, he complained of sudden severe abdominal pain accompanied by abdominal distention, guarding, and direct and rebound tenderness on all quadrants. He had hypotension and on laboratory workup, had decreasing hemoglobin levels with elevated WBC count and lactate. Contrast-enhanced abdominal CT revealed portal and superior mesenteric vein thrombosis, bowel wall ischemia along the segment of the jejunum in the left hemiabdomen, and infrarenal abdominal aorta and ascending aorta thrombi.

Emergency exploratory laparotomy was done with segmental jejunoileal resection and primary end-to-end anastomosis with intraoperative findings of gangrenous small bowels measuring 100 cm in length, with the rest of the proximal small bowels noted to be dilated and edematous. The patient was transferred to the intensive care unit post-operatively for closer monitoring; Heparin drip was started 24 hours post-surgery. Histopathology results showed extensive transmural infarction, hemorrhage, and necrosis on small bowel segments; organizing thrombi were seen on mesenteric vessels.

The patient was worked-up for other causes of hypercoagulable states which showed elevated Homocysteine levels at 20.6 (NV: 5-12).

## Conclusion



**Hyperhomocysteinemia may predispose patients with liver cirrhosis to development of arterial and venous thrombosis**



**Identification of this high-risk group may be important to plan prevention management, such as vitamin supplementation, other Hcy-lowering strategies, or long-term anticoagulation.**

### Sources:

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