65 year old male with persistent abdominal pain for more than two weeks elevated LFTs and multiple visits to the ER with no definitive diagnosis.

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Superior Mesenteric Vein Thrombosis
Axial and coronal CT demonstrate filling defect in the superior mesenteric vein compatible with superior mesenteric vein thrombosis.
Sagittal CT demonstrates a large filling defect within the superior mesenteric vein that extends to the proximal portal vein.
Superior mesenteric vein thrombosis

**Epidemiology:**
• 5-15% of all cases of acute mesenteric ischemia.
• Despite thrombosis of the SMV, small bowel necrosis is rare presumably due to persistent arterial supply and multiple collaterals.

**Etiology:**
• Hypercoagulable states.
• Recent abdominal surgery.
• Sepsis.
• Portal hypertension.
• Mechanical narrowing.
• 20-40% of cases idiopathic.
Superior mesenteric vein thrombosis

Clinical presentation:

- **Vague** abdomen pain with gradually worsening diffuse, colicky pain.
- Symptoms may have been present for a few days.
- If ischemia progresses, eventual necrosis, perforation, sepsis/shock ensue.
- Imaging is the only reliable way of making the diagnosis.
- CT with contrast (portal venous phase timing) is the most accurate test, with excellent sensitivity (up to 100%).
Superior mesenteric vein thrombosis

CT findings:

- Filling defect in the superior mesenteric vein and branches (seen in 90% of cases)
- Mesenteric congestion and stranding
- Bowel wall (if ischemic):
  - thickening up to 8-9 mm
  - density (variable): hypo-attenuating due to edema
  - enhancement (variable): absent once infarcted
  - pneumatosis intestinalis: due to transmural infarction
- Ascites
Superior mesenteric vein thrombosis

**Differential Diagnosis:**

- **Vascular**
  - Acute superior mesenteric artery occlusion
  - Ischemia due to hypotension
  - Submucosal hemorrhage or hematoma
- **Inflammation/infection**
  - Crohn's disease
  - Radiation enteritis
  - Typhlitis
- **Neoplasm**
- **Pseudo-thickening related to incomplete distention and residual fluid**
References:


