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Mesenteric Panniculitis Presenting as Mechanical Small Bowel Obstruction: A Rare Case Report

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Abstract

Mesenteric panniculitis is an uncommon idiopathic inflammatory and fibrotic disorder of the mesenteric fat. It may present with nonspecific abdominal pain, distension, or rarely with intestinal obstruction. We report a case of a 76-year-old male who presented with acute intestinal obstruction secondary to mesenteric panniculitis, diagnosed radiologically on computed tomography (CT). The patient was managed conservatively with steroid therapy with favorable clinical improvement. This case highlights the diagnostic challenge and importance of recognizing mesenteric panniculitis as a potential but rare cause of bowel obstruction.

Keywords: Mesenteric Panniculitis, Intestinal Obstruction, Misty Mesentery, Small Bowel Obstruction, Conservative Management.

Introduction

Mesenteric panniculitis (MP) is a rare, benign, chronic inflammatory condition affecting the adipose tissue of the mesentery. The reported prevalence is less than 1% on abdominal CT scans, with a male predominance in the 6th to 7th decade. The etiology remains uncertain but is often associated with prior abdominal surgery, trauma, autoimmune disorders, or malignancy. Most cases are asymptomatic or present with nonspecific abdominal pain. Development of bowel obstruction due to mesenteric panniculitis is rare, with only a few cases reported in the literature. We present a case of mesenteric panniculitis presenting as small bowel obstruction in an elderly male, successfully managed conservatively.

Case Presentation

A 76-year-old male presented to the emergency department with complaints of diffuse abdominal pain and obstipation for three days. The pain was constant, non-radiating, and aggravated with movement. There was no history of fever, vomiting, or diarrhea. The patient had no prior abdominal surgeries or significant comorbidities except cholelithiasis diagnosed six months prior and was on long-term sodium valproate for seizure disorder.

On examination, the abdomen was distended with diffuse tenderness but no guarding or rigidity. Bowel sounds were sluggish. Digital rectal examination revealed an empty rectum. Vital signs: BP 138/82 mmHg, pulse 86/min, SpO_2 97% on room air.

Laboratory investigations revealed: Hb 11.2 g/dL, TLC 13,200/mm³, Serum sodium 138 mEq/L, potassium 4.0 mEq/L, Blood urea 48 mg/dL, creatinine 1.9 mg/dL, LFTs within normal limits. X-ray abdomen (erect) showed multiple air–fluid levels with dilated bowel loops, suggestive of small bowel obstruction. Ultrasonography demonstrated minimal free fluid with echogenic mesenteric fat and thickened bowel loops. Contrast-enhanced CT (CECT) abdomen and pelvis revealed increased attenuation and stranding of the mesenteric fat with a characteristic "misty mesentery" appearance, mild mesenteric lymphadenopathy, and dilated proximal bowel loops — findings consistent with mesenteric panniculitis causing partial small bowel obstruction.

Figure 1: X-ray abdomen Erect suggestive of multiple air fluid level

Figure 2: X-ray abdomen supine view showing dilated small bowel loops.

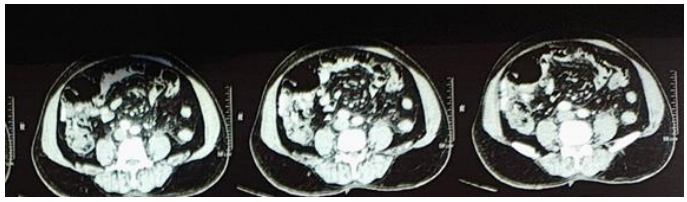

Figure 3: CECT- whole abdomen showing typical misty mesentery

The patient was managed conservatively with oral corticosteroids (prednisolone) which was gradually tapered, nasogastric decompression, intravenous fluids, broad-spectrum antibiotics (ceftriaxone and metronidazole), analgesics, and bowel rest. Over the next 72 hours, abdominal distension decreased and bowel sounds returned. Oral intake was gradually resumed, and the patient was discharged after clinical improvement.

Discussion

Mesenteric panniculitis represents a spectrum of idiopathic inflammatory disorders of the mesenteric fat, ranging from mesenteric lipodystrophy (fat necrosis) to retractile mesenteritis (fibrosis). Histopathologically, it is characterized by chronic inflammation, fat necrosis, and fibrosis in varying proportions. Radiologically, the "misty mesentery" appearance on CT — due to increased mesenteric fat density and small soft-tissue nodules — is characteristic. A "fat halo sign" and "tumoral pseudocapsule" may also be observed. Differentiation from lymphoma, carcinoid, or carcinomatosis is essential.

The exact mechanism of obstruction in MP is thought to be due to mesenteric edema, inflammatory adhesion, or fibrotic encasement of bowel loops. Most cases respond to conservative management with corticosteroids, tamoxifen, or colchicine; surgical intervention is reserved for intractable obstruction or diagnostic uncertainty.

Our case adds to the limited literature describing bowel obstruction secondary to mesenteric panniculitis, especially in a patient with no prior abdominal surgery. Prompt recognition and non-operative management resulted in a favorable outcome.

Conclusion

Mesenteric panniculitis is an uncommon and often under-recognized cause of small bowel obstruction. Radiological diagnosis plays a pivotal role, and conservative management yields good outcomes in most patients. Awareness of this entity helps avoid unnecessary surgical interventions.

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