

Inferior Mesenteric Arteriovenous Fistula Treated with Embolization



Presenter:

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Introduction:

Inferior mesenteric arteriovenous fistulous malformations are a rare yet reversible cause of ischemic colitis. They can cause an increased outflow of blood in the venous circulation and predispose to colon ischemia. We report a case of inferior mesenteric arteriovenous fistula causing ischemic colitis in an atypical distribution in the IMA territory.

Case Description:

A 50-year-old gentleman presented to the emergency room with a 3-week history of abdominal pain and bloody diarrhea. His symptoms started with a dull pain, 8/10 in intensity, with radiation to his lower back. He also had a low appetite for the duration of his abdominal pain. He described having around ten bowel movements daily with blood mixed with mucus. CT abdomen showed diffuse circumferential thickening involving the entire sigmoid colon, extending to the upper rectum suggesting non-specific colitis. He came to the hospital 2 weeks prior to his presentation and underwent a colonoscopy which showed severe diffuse inflammation in the distal descending colon, sigmoid colon, and proximal rectum, suggesting left-sided colitis. Biopsies from the region showed evidence of ischemic colitis. His CT-angiography showed engorgement of the IMA and IMV, with an early contrast in IMV, suggesting an IMA to IMV AV fistula within the left hemipelvis. This suggested vascular malformation as the cause of the colorectal findings. The patient subsequently underwent embolization of two branches of IMA and stent placement in IMA, closing the AV fistula. The patient tolerated the procedure without any complications.

Discussion:

Ischemic colitis is commonly seen in the watershed areas of the colon, such as splenic flexure and rectosigmoid junction, due to arterial anastomosis between the mesenteric arteries supplying the colon. In this case, the patient had diffuse ischemic findings from the distal rectum extending to descending colon, which is atypical for the distribution of colonic ischemia. CT angiography is an important diagnostic tool for identifying the pathology in such situations. This situation showed an AV fistula between the IMA and IMV, which impaired colonic blood supply and caused symptomatic ischemic colitis.

Inferior mesenteric arteriovenous (IMA) fistulous malformations are a rare yet reversible cause of ischemic colitis.

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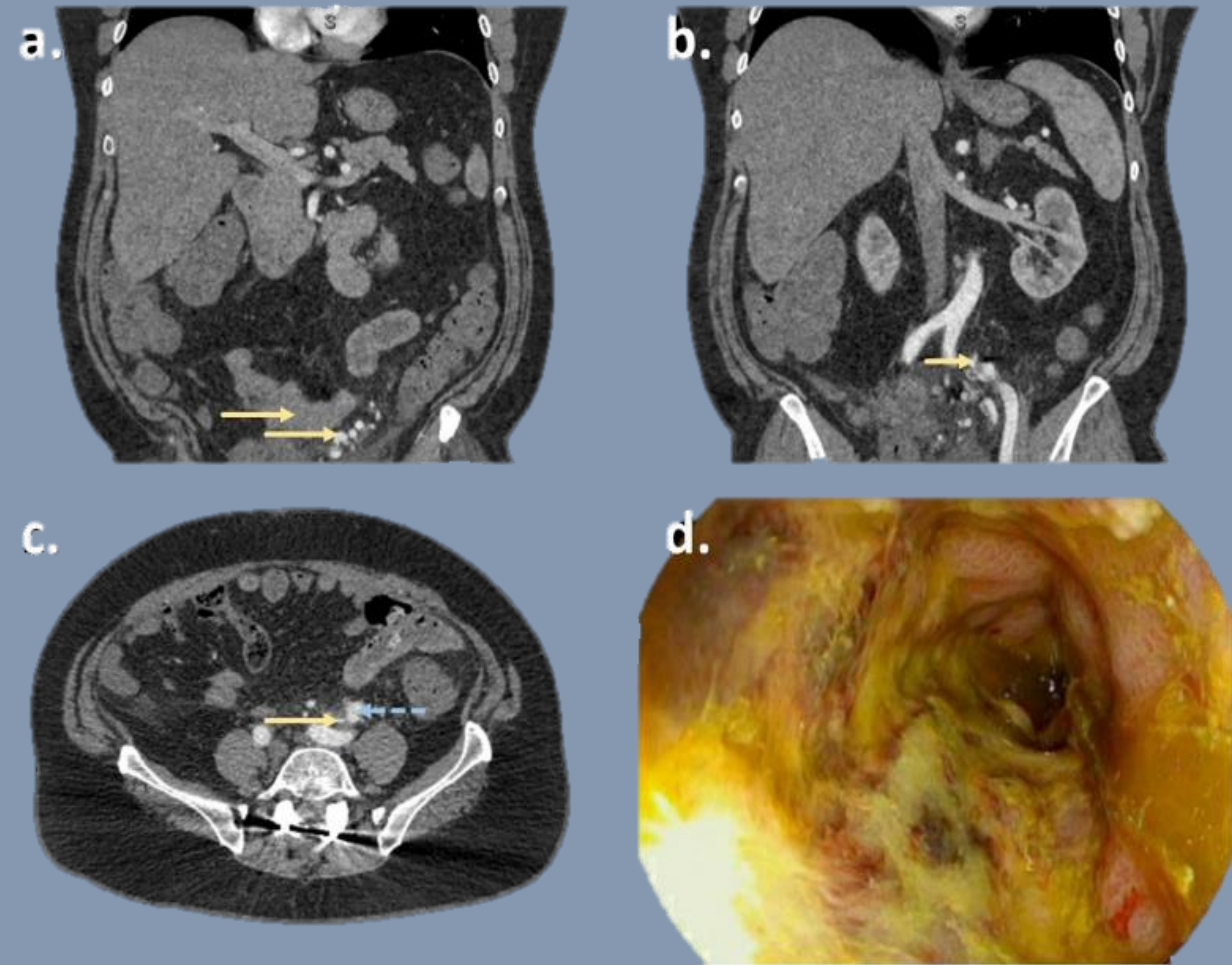


Figure 1. a. Early filling of dilated mesenteric veins (bottom arrow) with adjacent bowel wall edema due to venous congestion (top arrow) b & c. inferior mesenteric artery (arrows) adjacent to ill-defined area of contrast (dashed arrow) thought to represent arterio-venous fistula d. view from sigmoidoscopy showing ischemic colitis in the sigmoid colon