

Portal venous gas following colonoscopy and small bowel follow-through in a patient with Crohn's disease

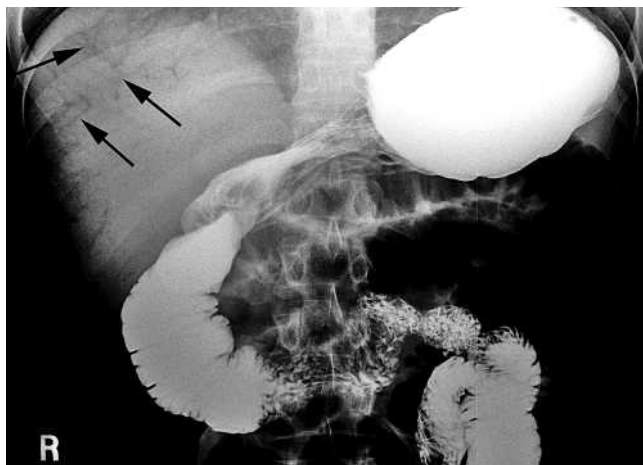


Figure 1 Hepatic portal venous gas (black arrows) seen as radiolucencies extending to the periphery of the liver capsule on plain film following administration of oral barium contrast.

We present a case of benign portal venous gas following colonoscopy and small bowel follow-through (SBFT). A 24-year-old man with Crohn's disease presented with abdominal pain, nausea, and weight loss. He underwent colonoscopy on hospital day 2 which showed active disease throughout the colon with rectal sparing and skip lesions. SBFT was performed later that morning. Preliminary scout films were unremarkable; however, hepatic portal venous gas (HPVG) (► **Figure 1**) was seen on films taken after administration of oral barium contrast. HPVG was first identified 2.5 h after colonoscopy and 30 min following barium administration. No abdominal free air was present. The patient was treated for active Crohn's colitis and remained clinically stable. Serial abdominal films demonstrated resolution of HPVG within 24 h. HPVG is caused by mucosal damage alone or in combination with bowel distension, sepsis, and invasion by gas-producing bacteria [1–3]. The most common cause is bowel necrosis [1]. Endoscopic procedures, ulcerative colitis, and Crohn's dis-

ease each account for 4% of cases [2]. Despite being reported following SBFT in conjunction with Crohn's disease, upper gastrointestinal barium examinations have not been recognized as an independent cause of portal venous gas [4]. In the absence of peritoneal signs or free air, HPVG is a benign finding in patients with Crohn's disease [2,4,5] especially following diagnostic studies of the colon [5]. In patients with no other indication for surgery, conservative management of HPVG is recommended as mortality rates in nonoperated and operated cases are similar (39% and 38%, respectively) [2]. Crohn's disease probably provided the necessary mucosal damage, with bowel distension created during colonoscopy and SBFT causing HPVG in this patient. It is possible that HPVG occurs more frequently than previously reported in Crohn's patients following colonoscopy, as imaging tests which would allow visualization of HPVG are not routinely obtained after the procedure [4].

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References

- 1 Liebman PR, Patten MT, Manny J et al. Hepatic-portal venous gas in adults: etiology, pathophysiology, and clinical significance. *Ann Surg* 1978; 187: 281–287
- 2 Kinoshita H, Shinozaki M, Tanimura H et al. Clinical features and management of hepatic portal venous gas. *Arch Surg* 2001; 136: 1410–1414
- 3 Ohtsubo K, Okai T, Yamaguchi Y et al. Pneumatosis intestinalis and hepatic portal venous gas caused by mesenteric ischemia in an aged person. *J Gastroenterol* 2001; 36: 338–340
- 4 Kirsch M, Bozdech J, Gardner DA. Hepatic portal venous gas: an unusual presentation of Crohn's disease. *Am J Gastroenterol* 1990; 85: 1521–1523
- 5 Katz BH, Schwartz SS, Vender RJ. Portal venous gas following a barium enema in a patient with Crohn's colitis. A benign finding. *Dis Colon Rectum* 1986; 29: 49–51

Bibliography

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