LETTER TO THE EDITOR

Pneumatosis intestinalis and hepatic portal venous gas in Crohn’s disease

Dear Sir,

A 44-year-old man with a 16-year history of ileal-colonic Crohn’s disease (CD) presented with acute onset severe abdominal pain and vomiting. On examination, he was febrile and a distended and generalized tender abdomen was noted with signs of peritoneal irritation. Laboratory tests revealed increased white blood cell count of 12,500/mm³. The other laboratory values were within normal range. Computed tomography (CT) scan disclosed pneumoperitoneum and dilated loops of the small intestine with diffuse intramural gas collections (Fig. 1), and intrahepatic gas with linear branching at the periphery (Fig. 2). Definite mesenteric ischemia were not evident. These findings suggested the small bowel obstruction leading to the pneumatosis intestinalis (PI), perforation, and hepatic portal venous gas (HPVG). During emergency laparotomy, the perforated ileum, which was caused by CD ulcers and strictures, was resected with ileostomy formation. Postoperative course was uneventful. He now remains well with the maintenance infliximab treatment.

The primary PI (15% of cases) is a benign idiopathic condition and usually involves the colon as pneumatosis cystoides intestinalis. The secondary PI (85% of cases) is mostly caused by mesenteric ischemia and necrosis, frequently associated with HPVG, with a high mortality rate. This disorder has been also observed in nonischemic diseases, including iatrogenic (post-endoscopy, post-operation), traumatic, inflammatory (diverticulitis, ulcerative colitis, CD), infectious (sepsis), medication-induced (corticosteroids and immunosuppressive), autoimmune, neoplastic, obstructive causes, and chronic pulmonary disease and with a relatively favorable outcome.1,2 The pathogenic mechanisms have been suggested as follows: mucosal injury and/or increased intraluminal pressure may allow intraluminal gas to enter the damaged bowel wall, leading to PI, and also to enter mesenteric veins, leading to HPVG.2 Severity of mesenteric ischemia in CT has been indicated as bandlike PI,1 occlusion of the vasculature, bowel wall thickening, either marked or absent enhancement of the bowel wall, and ascites.2 Up to 20 cases of HPVG associated with CD have been reported.3 Although the overall outcome of these cases has been favorable, careful management including assessment of mesenteric ischemia and early surgical interventions should be performed to avoid life-threatening catastrophes because CD itself has several predisposing factors leading to PI.

References
