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IMAGES IN EMERGENCY MEDICINE

Infectious Disease

Man with fever, cough, and weakness

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1 | CASE

A 59-year-old man, with no past medical history, presented with fever (39.7°C), cough, and weakness. Physical examination was unremarkable and a chest radiography showed mild bilateral interstitial infiltrates; result of oropharyngeal swab was positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

Three days later the patient presented with vomiting and a mild abdominal pain with periumbilical tenderness and decreased bowel sounds without significant signs of peritonitis.

2 | IMAGE

Abdominal computed tomography (CT) showed hepatic portal gas (Figure 1, white arrow) and air within the superior mesenteric veins (Figure 1, yellow arrow) and within the wall of stomach, ileum, and colon.

Because of worsening abdominal pain, laparotomy exploration was performed revealing the presence of crackling of the stomach, ileum, and descending colon, but no signs of bowel ischemia or perforation, so resection was not needed. Two weeks later a postoperative CT scan (Figure 2) revealed that intestinal gas accumulation had completely disappeared. The patient recovered uneventfully and in follow-up continues to do well.

3 | DIAGNOSIS AND DISCUSSION

Gas within the portal system (hepatic portal venous gas) and gas within the wall of the bowel (pneumatosis intestinalis) are a relatively infrequent finding and typically associated with secondary causes including bowel ischemia, autoimmune disease, and inflammatory bowel diseases as well as with endoscopic procedures, mechanical ventilation, and pulmonary diseases; among all of gastrointestinal complications it is probably the most challenging one to diagnose and treatment depends mainly on the underlying disease.[1] SARS-CoV-2 use angiotensin-converting enzyme 2 receptor to facilitate viral entry into target cells; also gastrointestinal cells express this receptor and thus, probably mediating inflammation, can be associated with an increased risk of colitis.[2] Although the pathophysiologic mechanisms

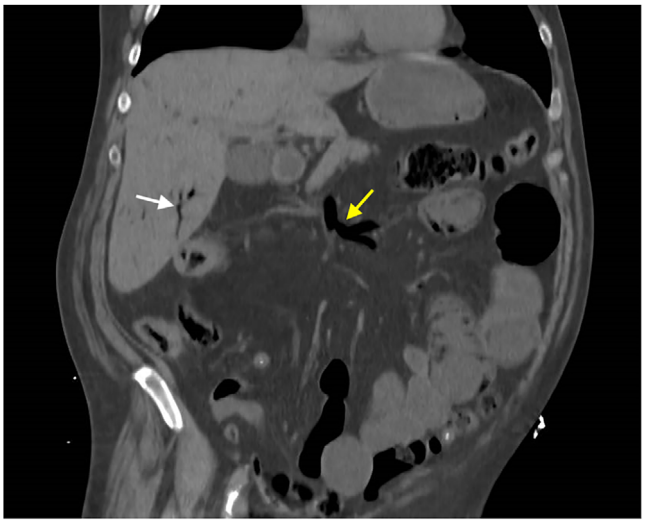

FIGURE 1 Abdominal computed tomography (CT) showing hepatic portal venous gas (A, white arrow). Gas is also seen within the superior mesenteric veins (B, yellow arrow)

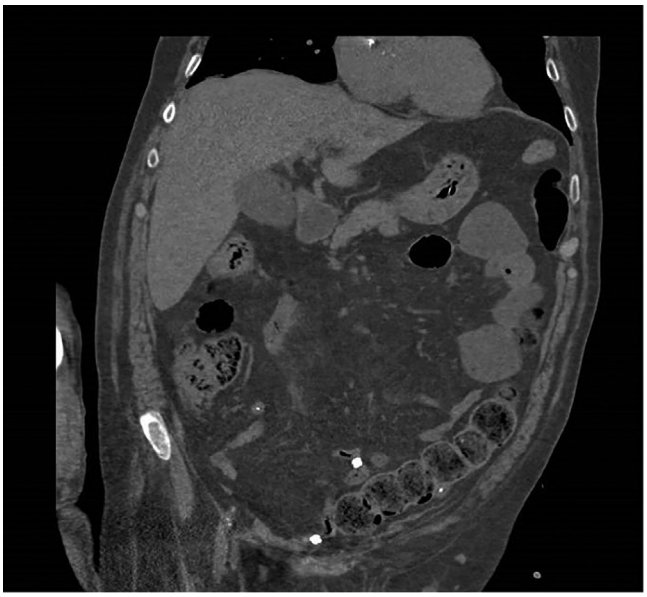

FIGURE 2 Abdominal computed tomography (CT) shows the complete improvement of the clinical picture

in this report have not been clearly established, we have speculated that intestinal viral load may have played a role in the development of excessive gas production within portal system veins and the bowel wall.

CONFLICTS OF INTEREST

None to declare.

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