Soft-tissue images. Portal vein thrombosis and gas formation: unusual presentation of colon cancer

A 61-year-old woman presented to the Emergency Department with severe right lower quadrant pain and sepsis. Investigations revealed microcytic anemia and a significantly elevated leukocyte count. Emergent computed tomography (Figs. 1 to 3) demonstrated a diffusely thickened ascending colon with nodular mucosa and portal vein thrombus extending into the superior mesenteric vein with gas formation, indicating perforation into the portal venous system. Blood cultures were positive for *Clostridium* spp.

At laparotomy, omental, peritoneal and liver metastases were found and there was gross perforation of the tumour into the mesentery, indicating the source of her portal sepsis. There was no evidence of intestinal ischemia. A hemicolectomy was done. Pathological examination of the resected specimen revealed a moderately differentiated adenocarci-

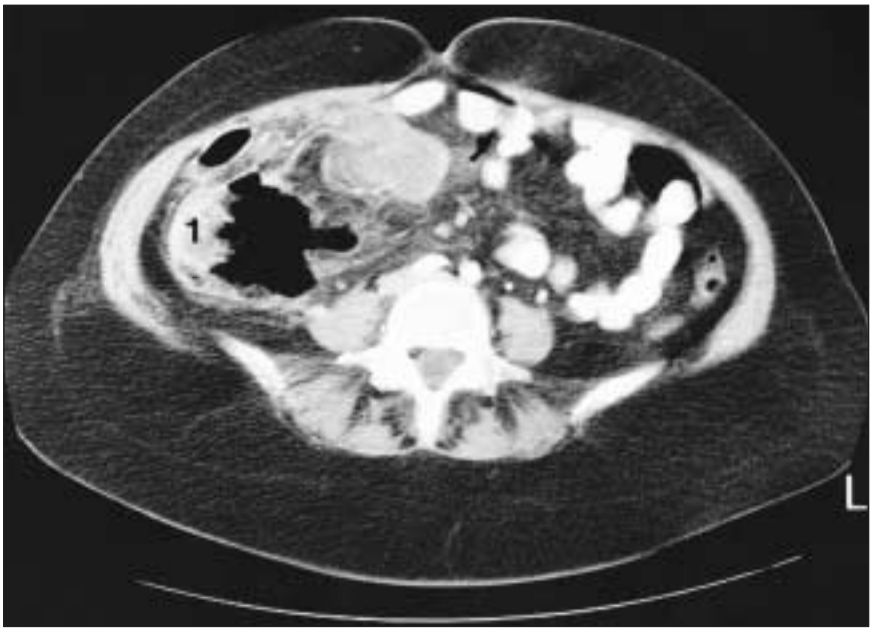

FIG. 1.

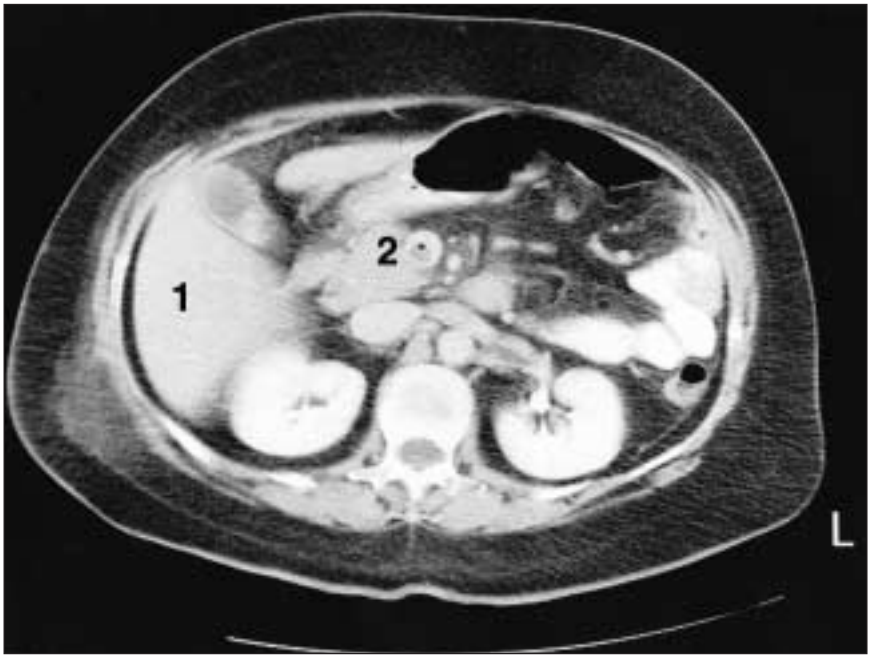

FIG. 2.

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noma of the colon. Postoperative management included anticoagulation and broad-spectrum antibiotics, including penicillin. She was discharged 2 weeks postoperatively and was taking coumadin. She died 3 months later of her disease.

Portal vein thrombosis is a rare occurrence with numerous causes, the most common of which are cirrhosis and neoplastic disease in adults.[1] Anticoagulation is the treatment of choice for this condition when it is not associated with intestinal ischemia. Gas in the portal venous system is indicative of perforation of visceral origin and usually mandates immediate laparotomy. However, the presence of portal venous gas has been reported in various clinical settings, in many cases not requiring urgent laparotomy. An algorithm for the management of portal venous gas has been outlined by Hong and associates.[2] Similarly, clostridial sepsis is rare and is associated with a very high death rate despite advances in antibiotic therapy. It most often has a gastrointestinal source, either directly from gastrointestinal neoplasia or indirectly from mucosal translocation in a setting of weakened host resistance.[3] Clostridial bacteremia is almost always associated with findings of sepsis and merits prompt investigation and treatment.

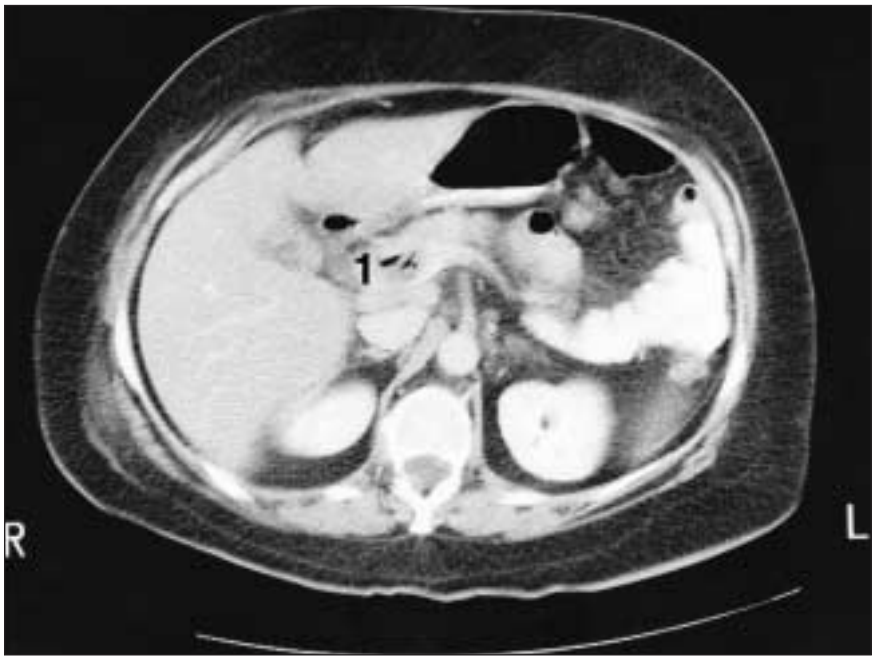

FIG. 3.

References

1. Cohen J, Edelman RR, Chopra S. Portal vein thrombosis: a review. *Am J Med* 1992;92:173-82.

2. Hong JJ, Gadaleta D, Rossi P, Esquivel J, Davis JM. Portal vein gas, a changing clinical entity. *Arch Surg* 1997;132:1071-5.

3. Myers G, Ngoi SS, Cennerazzo W, Harris L, DeCosse JJ. Clostridial septicemia in an urban hospital. *Surg Gynecol Obstet* 1992;174:291-6.