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Black stomach: acute gastric wall ischemia due to polycythemia of an unknown origin

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Dear Editor,

A 65-year-old male with polycythemia of an unknown origin who was under investigation presented to the Emergency Department with a history of diffuse abdominal pain and hematemesis. Blood tests revealed a hemoglobin level of 22 g/dl, hematocrit of 60% and acute renal insufficiency (creatinine of 5.5 mg/dl). Upper endoscopy revealed a black ulcerated gastric mucosa compatible with acute necrosis of the corpus and antrum of the stomach (Fig. 1A). Due to the distributive shock with multi-organ dysfunction, the patient was admitted to the Intensive Care Unit and underwent multiple organ support therapy. He recovered progressively and endoscopic reassessment one month after admission showed complete healing of the gastric mucosa (Fig. 1B).

Discussion

Acute ischemia of the gastric mucosa that results in a black stomach is a very rare event, as the blood supply of the stomach has a rich collateral blood flow system(1). Even though there are few cases described in the literature, many etiologic factors have been suggested. These include intrathoracic herniation of the gastric cavity with associated gastric volvulus (2), transverse colon volvulus with associated gastric ischemia (3), acute necrotizing gastritis, vascular compromise and acute gastric dilation (due to bowel obstruction, complications after abdominal surgery [4], trauma, medical conditions or even pyloric stenosis [1]). In this particular case, vascular compromise of

the gastric blood vessels might have played a major role in the pathogenesis of the ischemic process due to the severe polycythemia with associated hyperviscosity and the absence of any other etiological factor listed above.

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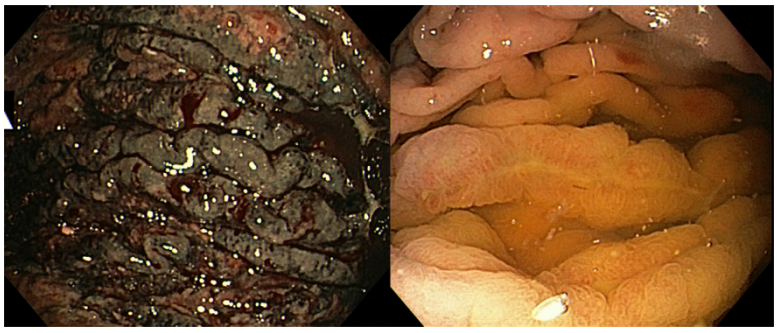

Fig. 1. A. Black and ulcerated gastric folds. B. Complete mucosal healing one month after admission.