

therapy. Days later, given the persistence of the patient's haematochezia, a computed tomography (CT) angiography of the abdomen was ordered. This ruled out active bleeding and artery occlusion. It also found no segmental thickening or signs of a poor prognosis in the colon wall. As of that day, the patient's antiplatelet therapy was suspended. Two weeks from the first episode, the bleeding from the patient's rectum had been self-limited, so a decision was made to perform another colonoscopy (Fig. 1). This test showed the same lesions, now fibrinated, and improvement of the mucosal impairment in the same colon segment that was reported in the first endoscopy and classified as segmental ischaemic colitis. The colonoscopies found no diverticula in the colon.

The most common form of intestinal ischaemia is ischaemic colitis. It typically presents with colicky pain, defecation urgency and rectal bleeding. Most patients have mild forms that resolve within a few days with the mucosa recovering in two to three weeks. However, in more serious cases, recovery from the lesions may take up to six months, even if the patient remains asymptomatic. In addition, it must not be forgotten that a possible complication is bowel perforation.<sup>4</sup>

The recent COVID-19 outbreak has been deemed a global health emergency. As of the time of writing, there is still no effective treatment or available vaccine. Tocilizumab is useful in selected cases.<sup>3</sup> Some possible adverse effects of a gastrointestinal nature of this drug are gastric ulcers (<2%), diverticulitis and gastrointestinal perforation.<sup>5</sup> In our case, the patient presented colonic ulcers with episodes of haematochezia resulting in anaemia, which lasted for two weeks and ultimately were self-limiting.

The Naranjo algorithm was applied to determine the probability of a causal relationship between tocilizumab administration and ischaemic colitis, with a result of four points. Given all this, the possibility of an association must be taken into account. There are other limitations, such as the absence of a histological diagnosis of said ulcers, the presence of prior vascular disease and the patient's exposure to other events promoting possible ischaemic colitis (sepsis, hypotension, systemic impairment that required intensive care, etc.).

At present, in Spain there are several studies for evaluating the effects of tocilizumab in critically ill patients. Future lines of research could lead to studying the possible relationship between tocilizumab and ischaemic colitis. Few studies have observed an increase in gastrointestinal

perforation in patients with rheumatoid arthritis who receive tocilizumab, although the mechanism by which such damage occurs is unknown. One hypothesis points to inhibition by IL-6 of vascular endothelial growth factor, which plays an important role in maintaining the integrity of the intestinal mucosa when it is damaged.

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## Conflicts of interest

The authors declare that they have no conflicts of interest.

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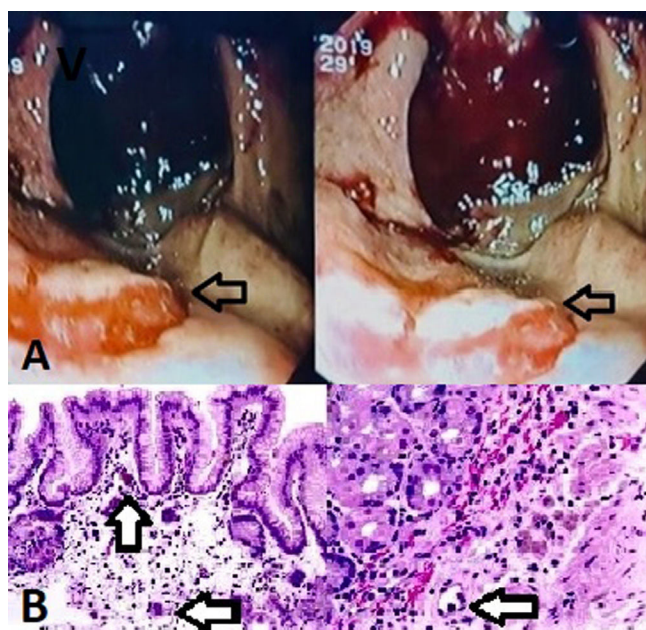
## Massive upper gastrointestinal bleeding due to gastric lanthanosis



### Hemorragia digestiva alta masiva secundaria a lantanosis gástrica

Lanthanum carbonate is a drug frequently used in patients with end-stage renal disease and hyperphosphataemia.<sup>1,2</sup> It

is an alkaline heavy metal that works by binding dietary phosphorus in the stomach (optimally at pH 3 to 5), forming an insoluble complex that is excreted predominantly in stool, being the kidney and bile excretion almost none.<sup>1,3</sup> In a small percentage of patients (0.00127% of cases), lanthanum is absorbed and deposited in the gastrointestinal tract, being the stomach and duodenum the most frequent locations.<sup>4</sup>



**Figure 1** (A) Gastroscopy image in retroversion, which shows abundant blood content as well as an erythematous lesion with a central whitish area (black arrow). (B) Hematoxylin-Eosin stain. We observed histiocyte aggregates and multinucleated giant cells, with deposition of a dark intracytoplasmic material and expansion of the lamina propria (black arrow).

We describe the case of a 51-year-old man with a medical history of hypertension, end-stage renal disease undergoing haemodialysis and severe hyperparathyroidism. The patient was not on any anticoagulant or antiplatelet therapy, but was taking lanthanum (1000 mg, 3 times daily) for hyperphosphataemia related to chronic kidney disease for many years.

He presented to the emergency department with hematemesis, loss of consciousness and hemodynamic instability. The patient denied having taken nonsteroidal anti-inflammatory drugs or proton pump inhibitors. Laboratory analysis showed severe anemia (hemoglobin 5.3 g/dL). Abdominal CT angiography was performed, showing active arterial bleeding from the posterior surface of the stomach. Esophagogastroduodenoscopy (EGD) revealed a non-removable clot on the fundus and greater curvature of the stomach, with underlying active bleeding. After several endoscopic attempts to stop bleeding without success and due to the hemodynamic compromise of the patient, surgical treatment was carried out. Intraoperative EGD was done to identify the bleeding point, observing an erythematous lesion with central whitish mucosa in the posterior gastric surface (Fig. 1A). Atypical gastrectomy was performed by excision of the bleeding lesion.

The histopathological study of the lesion revealed foveolar hyperplasia with prominent histiocytosis and

multinucleated giant cells, with deposits of a dark intracytoplasmic material (Fig. 1B), compatible with gastric lanthanosis. There was no evidence of *Helicobacter pylori* infection.

Lanthanum carbonate deposits in the gastrointestinal tract can be asymptomatic (most frequent) or produce vomiting, abdominal pain, resistant iron deficiency anemia or, less frequently, gastrointestinal bleeding.<sup>1</sup>

The available scientific evidence in the medical literature about gastrointestinal bleeding due to lanthanum deposit is limited,<sup>4</sup> being the first case report to the best of our knowledge of massive upper gastrointestinal bleeding due to deposit of this medication.

Endoscopic findings of patients on phosphate binders include diffuse or patchy deposits of a whitish material in the gastric mucosa, erosions, ulcerations or gastric polypoid nodular lesions.<sup>1</sup> It is recommended to discontinue lanthanum treatment and follow-up with serial endoscopies to ensure the improvement or disappearance of the lesions.<sup>1,3,4</sup>

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