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Short Communication

Ischemic colitis and short bowel disease due to chororonavirus disease 2019 (COVID 19)

Paloma González Lázaro a,*, Amparo Lomas Meneses a, Florentino del Val Zaballos a, Antonio Morandéira Rivas b

a Department of Endocrinology and Nutrition, La Mancha Centro Hospital, Spain
b Department of Surgery, La Mancha Centro Hospital, Spain

1. Introduction

COVID-19 has spread worldwide, with more than 2.5 million cases and over 80,000 deaths reported by the end of April 2020. In addition to pulmonary symptoms, gastrointestinal symptoms have been increasingly recognized as part of the disease spectrum. COVID-19-associated coagulopathy has recently emerged as a major component of the disease, leading to high morbidity and mortality.

Ischemic colitis has been reported to be associated with a hypercoagulable state, However few cases have been reported of COVID-19 associated with ischemic colitis [1].

We would like to report a case of a 53 year old man with medical history of type 2 diabetes, and hypercholesterolemia, with ischemic colitis as first manifestation of infection of COVID 19.

2. Case report

The patient attended the emergency service complaining abdominal pain and vomiting in the last 4 days. He denied diarrhea with blood, mucous or pus. At initial presentation, he was afebrile and hemodynamically stable, and his oxygen saturation was 98% at rest in room air. Initial analysis revealed no anemia, slightly leukocytosis without any other relevant findings. The lactic acid level was 4.9 mmol/L [0.5–2.2 mmol/L]. Chest X-ray showed no relevant findings. The patient was initially managed conservatively with bowel rest and intravenous fluids, and the antibiotics ceftriaxone and metronidazole were started. However, 24h later, analysis showed no improvement. Chest X-ray control (Fig. 1) showed reticular infiltration in the periphery of the left lung, without clinical manifestations, and computed tomography (CT) of the abdomen and pelvis showed mucosal hypoenhancement on ascending colon as a concern for ischemic colitis (Fig. 2). So, given the relevant findings, the surgery team performed an exploratory laparotomy with small bowel resection of 148 cm and 32 cm of right colon with creation of end-ileostomy (Anatomopathology report revealed mesenteric venous thrombosis). A nasopharyngeal swab for SARS-CoV-2 RT-PCR was positive. The patient received treatment with anticoagulation, Hidroxichloroquine and Azitromizine and was discharged.

Three weeks later, the patient was admitted to the intensive care unit with acute renal failure and severe hydroyelectrolytic disorders due to high output ileostomy (>6L) and he reported weight loss of 18 kg (habitual weight 120 kg, Actual weight 103 kg). Management with loperamide and codeine was started, reducing output to 2.2–2.5 L/day. Supplementation with potassium, magnesium and
hyperproteic enteral formula was initiated. Two weeks later, closure of ileostomy was performed without incidences and period of intestinal adaptation started, initially with more than 20 depositions/day and he reported choleretic diarrhea, which was managed with low-oxalate diet and resincolestiramine 4 mg/day. Nowadays, one month after ileostomy closure the patient weights 103 kg and has 3–4 depositions/day and follows treatment with low-oxalate-diet, loperamide (flas formulation), 12 mg/day, resincolestiramine 4 mg/day, cianocobalamine 1mg/monthly and Magnesium 200 mg/day, sitagliptine 50 mg/day and Lansoprazol (flas formulation) 15 mg/day. Last analysis with nutritional parameters without alterations.

3. Discussion

Hypercoagulable states have been recognized as one of the risk factors for ischemic colitis, although the extent of how the coagulable state leads to ischemic colitis is not well understood. COVID-19-associated coagulopathy is a well-defined phenomenon and has been associated with poor prognosis [2]. It was suggested that the hypercoagulability observed in COVID19 was related to the high inflammatory state associated with a “cytokine storm” rather than a progression of disseminated intravascular coagulation (DIC) [3]. To our knowledge, few cases of SARS-CoV-2- induced ischemic colitis have been reported [1] and none of them with a massive short bowel resection with short bowel disease as final result.

Moreover, Our patient had no underlying risk factors for ischemic colitis, despite the confirmed infection of Covid 19, resulting to be the first manifestation of the virus, followed by pulmonary affection. Our patient was hemodynamically stable throughout his hospital stay. It is difficult to prove causation in this setting, but the fact that his ischemic colitis occurred during the infection with SARS-CoV-2, when his inflammatory and hypercoagulable state were evident, makes this association very likely to be related.

Conclusion

We wish that this case will be added to the limited literature available about highlighting the possible hypercoagulable state leading to gastrointestinal complications in patients with SARS-CoV-2 infection.

Statement of authorship

All authors contributed equally to this case-report communication.

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Statement of ethics

The patient provided both verbal and written informed consent to publish the case, including the publication of images.

Declaration of Competing Interest

We have no competing interests to disclose.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.clnesp.2020.08.009.

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