Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Correspondence

Safe administration of corticosteroids in severe ulcerative colitis and active SARS-CoV2 infection

Dear Editor,

SARS-CoV2 is a novel coronavirus responsible for a potentially life-threatening infectious disease named COVID-19. Currently, there is no effective treatment for SARS-CoV2, and COVID-19 is managed with symptomatic therapies and supportive care.

In inflammatory bowel disease (IBD), immunosuppressive drugs may increase the risk of infection and/or of severe clinical forms of COVID-19 [1,2]. Therefore, IBD management in patients with concurrent COVID-19 is particularly challenging. International expert recommendations suggest to delay immunosuppressive therapy for at least 2 weeks in patients in remission with active infection [3]. Moreover, the optimal therapeutic strategy for patients with an acute severe ulcerative colitis (UC) and concurrent SARS-CoV2 infection is not established. Intravenous corticosteroids are usually the mainstay treatment for these patients. Recent data associated corticosteroid treatment with a higher patient's mortality compared to anti-TNF antibodies even though a subgroup analysis according to the disease activity (i.e. remission, mild or severe flares) was not performed [4]. Additionally, a letter from Italy reported a severe deadly COVID-19 pneumonia in a 80-year-old woman with a severe UC flare treated by corticosteroids [5].

Recently, we admitted a 20 year-old Somalian woman with UC diagnosed a year earlier, presenting a moderately severe UC flare with intense fatigue, abdominal pain and bloody diarrhoea. The patient was not on maintenance therapy because of a concurrent diagnosis of multidrug resistant miliary tuberculosis. At admission, the Lichtiger score was at 10. Laboratory analysis showed mild anemia and increased C-reactive protein (Table 1). A nasal swab for SARS-CoV2 was performed and resulted positive. Stool culture, *C. Difficile* toxin test and stool SARS-CoV2 RT-PCR were negative. A CT scan showed a pancolitis but no pulmonary lesions suggestive of COVID-19 pneumonia (Fig. 1).

Since systemic corticosteroids use in influenza patients has been associated with a significantly higher risk of lower respiratory tract infection and complications, we first decided to treat the patient with a combination of oral and rectal 5-aminosalicylic acid (4g/day p.o. and 1g/day locally). After 1 week, the patient did not improve and the Lichtiger score increased to 13. A flexible sigmoidoscopy showed a complete vascular pattern obliteration, multiple superficial ulcerations and pseudopolyps (UCEIS: 7/8). A nasal swab for SARS-CoV2 was repeated and resulted positive. As the patient was at low risk of developing a severe form of COVID-19 and her UC severity was worsening, we decided to start methylprednisolone 40 mg/day IV. The patient quickly improved at day 3 (Lichtiger score at 5) and did not develop any COVID-19 symptoms or complications. Laboratory parameters improved significantly (Table 1).

Acute severe ulcerative colitis is a life-threatening complication of UC and intravenous corticosteroids are the first-line therapy. Corticosteroids in IBD patients with SARS-CoV2 infection have been associated initially with worse outcomes [4]. However, in low-risk patients with asymptomatic SARS-CoV2 and acute severe UC, whether the risk associated with corticosteroids overweight the benefit is not clear. Recent data suggest a benefit of dexamethasone on the inflammatory state induced by COVID-19 in patients with respiratory failure [6] even though these results should still be taken with caution due to several study limitations such as the fact that at least 28% of participating patients were still hospitalized at the endpoint of the trial (day 28) [7].

Taking into account risk factors of severe COVID-19 (in particular age) is probably essential before using corticosteroids. In the SECURE-IBD database, 50% of IBD patients who died from COVID-19 and 73% who died and/or needed hospitalisation in an intensive care unit and/or requested invasive ventilation were 60 years or older (respectively 28% and 31% for patient $\geq$ 80 years old; n=1696) [8]. In our experience, the use of corticosteroids in a young adult patient in the second week of SARS-CoV2 infection was safe and effective for treating an acute severe UC flare.

Table 1
Laboratory parameters.

	Day 0	Day 7	Day 12	Day 15
SARS-CoV2 RT-PCR	Positive	Positive	NA	Negative
Treatment	No	5-ASA	CTC	CTC
Hemoglobin (g/dl)	11	10.5	10.1	10
C-reactive protein (mg/l)	18	122	96.5	15.3
Albumin (g/l)	39	34	34	27
Stools/day	9	7	8	6
Bloody stools (%)	<50%	<50%	<50%	0
Lichtiger score	10	13	13	5

5-ASA: 5-aminosalicylic acid; CTC: corticosteroids.

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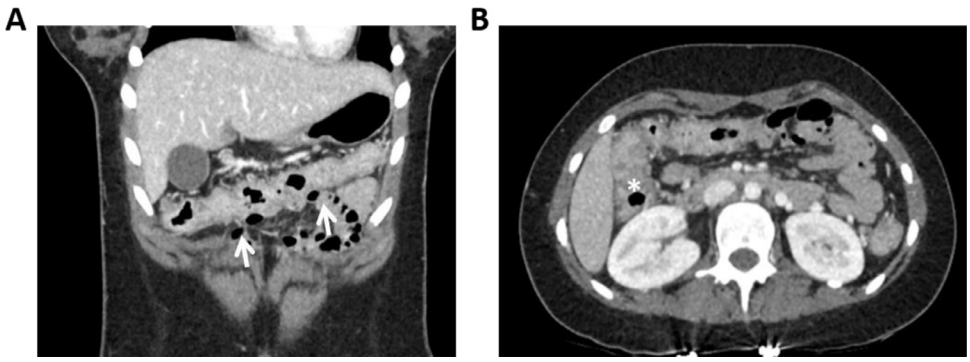

Fig. 1. CT scan showing colitis extended to transverse colon (A, arrows) and hepatic flexure (B, *).

Author contribution

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Declaration of Competing Interest

None.

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