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SCIENTIFIC LETTER

Dysentery as a rare GI symptom found in COVID-19 patients



La disentería como síntoma digestivo poco frecuente que se encuentra en los pacientes con COVID-19

Coronavirus Disease 2019 (COVID-19) caused by SARS-CoV-2 first started in Wuhan, China, and soon turned to a pandemic and still continue to spread across the world.^{1,2} With an increasing number of COVID-19 cases outside of China,

our clinics in Shahid Beheshti Hospital, Qom city, was faced with a large number of patients who were suspected of being infected with the SARS-CoV-2. Following the outbreak of COVID-19, the prevalence of gastrointestinal (GI) tract

Table 1 Serial laboratory results of 43-year-old woman with presentation of dysentery due to the infection with SARS-CoV-2.

Blood biochemistry			Serology, endocrinology and tumor marker			ESR 1 h, mm/h	21 ^a	0–20
Test, unit	Result	Reference range	Test, unit	Result	Reference range			
FBS, mg/dL	109	70–99 Diabetic: >126	CRP, mg/L	8.4 ^a	Up to 6	WBC, ×10 ³ /uL	7	4.1–10.5
Creatinine, mg/dL	1.54 ^a	0.7–1.4	Ferritin, ng/mL	95.8	20–250	Neutrophil, ×10 ³ /uL	5.70	2–7.7
Direct bilirubin, mg/dL	0.36 ^a	0–0.3	AFP (Clia), IU/mL	3.22	0–4	Lymphocyte, ×10 ³ /uL	3.61	1–2.7
SGOT (AST), U/L	30	11–37	CEA (Clia), IU/mL	2.02	Up to 4.7	Monocyte, ×10 ³ /uL	1.04	0.3–0.7
SGPT (ALT), U/L	28	13–40	<i>Hematology</i>			Eosinophil, ×10 ³ /uL	0.32	0.2–0.6
Iron (Fe), μg/dL	89	40–120	<i>Test, Unit</i>	<i>Result</i>	<i>Reference range</i>	Basophil, ×10 ³ /uL	0.03	0.01–0.3
TIBC, μg/dL	419	230–440	LDH	400	Up to 300	RBC, 10 ⁶ /μL	4.31	4.5–5.9
Hb A1c, %	6.2	Non diabetic: 4–6 Diabetic: >6.5				Hb, g/dL	13.80	13.5–17.5
						Platelet, 10 ³ /μL	92.6	80–100

Abbreviation: FBS: Fasting Blood Sugar; AST: Aspartate Amino Transferase; ALT: Alanine Transferase; TIBC: Total Iron-Binding Capacity; Hb A1c: Glycosylated Hemoglobin; CRP: C-Reactive Protein; AFP: Alpha-Fetoprotein; CEA: Embryonic Carcinoma Antigen; LDH: Lactate Dehydrogenase; WBC: White Blood Cell; RBC: Red Blood Cell; Hb: Hemoglobin.

^a Higher in comparison to the reference value.

symptoms significantly goes up. This incidence in COVID-19 patients is well documented in literatures.³ After February 20, 2020, the day that Iran reported as the start of COVID-19 outbreak, the number of patients referred to our GI clinic was unusually increased. The most important complaint of patients was the incidence of some unusual GI symptoms resistant to medication.⁴

One of the questions that need to be answered promptly is that whether the incidence of rare GI symptoms is possible in confirmed COVID pneumonia patients. The answer to this question may help physicians take better diagnostic and therapeutic approaches for patients with this symptom. Currently, we have reported the clinical data in details as well as the result of chest CT of a COVID-19 patient with dysentery.

A 43-year-old woman was referred to our gastroenterology clinic, complaining from dysentery for one week. She did not mention any cough, dyspnea or respiratory disorders. Her past medical history was unremarkable and she

ignored smoking, drinking or using any drugs and medications. Respiratory rate: 18 per minute and body temperature from oral root: 37.5–38 °C. In order to accurately evaluate the patient, laboratory test was performed. The results are summarized in (Table 1). The levels of CRP, LDH and ESR 1 h were higher than the normal range and were equal to 8.4, 400 and 21 respectively. Alkaline phosphatase, amylase serum and bilirubin values of the patient were in normal range. Medication with ciprofloxacin, 500 mg and metronidazole, 500 mg was started after the first symptoms of dysentery, to reduce the volume of diarrhea and severe dehydration. Due to the persistence of diarrhea and the lack of therapeutic response to medications, as well as evaluation for the probability of inflammatory bowel disease (IBD) in the patient, colonoscopy was performed which was resulted in patchy erythema (Fig. 1). Also, pathological finding was associated with the infiltration of inflammation cells which made us suspect infectious (viral) colitis. Since the incidence of such GI symptoms coincided with the COVID-

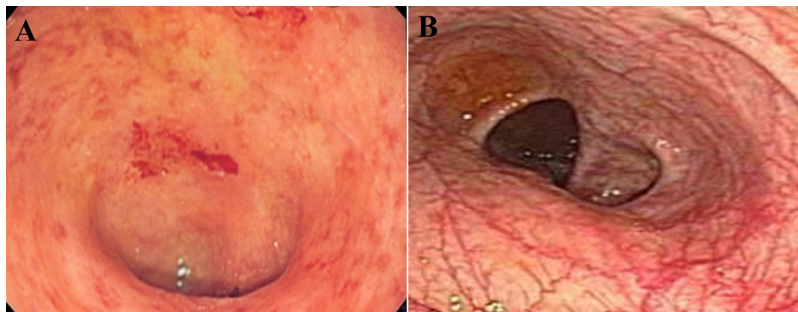


Figure 1 Colonoscopy finding of 43-year-old woman with presentation of dysentery which was resulted in patchy erythema.

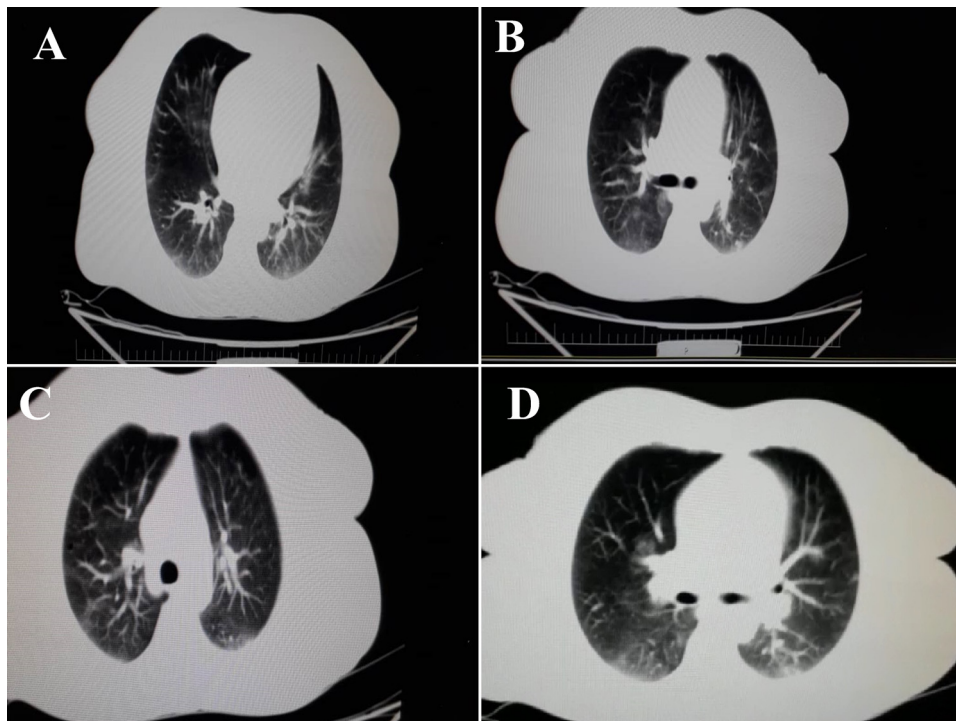


Figure 2 Chest CT scans (transverse plane) of 43-year-old woman with presentation of dysentery due to the infection with SARS-CoV-2. Chest CT resulted bilateral peripheral ground glass, crazy paving and small consolidation opacities.

19 outbreak in Iran, and also more importantly since the patients reported to reside in high risk areas, we suspected patients to be infected by SARS-CoV-2. Therefore, for more validation, laboratory-confirmed COVID pneumonia was performed by using SARS-CoV-2 conventional polymerase chain reaction assay and sequencing of the polymerase chain reaction (PCR) amplicons, which was reported to be positive for the patient. After performing chest CT scan, we noticed the bilateral lung involvement, as revealed bilateral peripheral ground glass, crazy paving and small consolidation opacities (Fig. 2). Patient was isolated in a negative pressure room for one week and underwent medications as mentioned above.

According to the findings of Zou et al., about the role of ACE-2 as the main host cell receptor for entrance of 2019-nCoV to cell and with notice to the high expression of ACE-2 receptor in the oral cavity, as well as in colon, intestine and gallbladder and enriching in epithelial cells, we supposed that this receptor may mediate some GI symptoms of infected patients.⁵ Previously, epidemiologic finding of Lai et al., demonstrated that among adult patients, some common respiratory symptoms were followed by diarrhea.³ Previously, we reported that infected patients with COVID-19 can present some unusual GI symptoms.⁴ These symptoms were resistant to medications and in some cases without any medications, they subsided.

At the age of COVID-19 crisis, in some patients, GI physicians may face rare GI symptoms such as dysentery, hepatic involvement or other ones in patients. Therefore, it is necessary that all GI physicians should be aware of the possible occurrence of these symptoms as an important prognosis of COVID pneumonia. Although, in this letter we only documented one case of this issue, at the age of COVID-19, all rare GI symptoms should be exactly addressed in new referred patients to GI clinic. Recording and investigation of these symptoms may open a new window to help finding valuable information on the characterization of this mysterious disease.

Declarations

Ethics approval

Approval was obtained from the ethics committee of Qom University of Medical Sciences. The procedures used in this study adhere to the tenets of the declaration of Helsinki (Nu: IR.MUQ.REC.1399.044).

Consent to publish

Patients signed informed consent regarding publishing their data and photographs.

Availability of supporting data

All data and materials are available.

Authors' contribution

Ahmad Hormati, Writing of the report and therapeutic physician. Mohammad Reza Ghadir, Therapeutic physician. Reza Aminnejad & Fatemeh Khodadust, Review and edit of the manuscript. Mahboubeh Afifian, Collecting of the data. Sajjad Ahmadpour, Writing of the report and correspondence.

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Conflict of interest

The authors declare that they have no conflict of interest.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.gastrohep.2020.06.005](https://doi.org/10.1016/j.gastrohep.2020.06.005).

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