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Inflammatory Bowel Disease during COVID-19 Pandemic: A Prospective Cohort Study of Incidence Rate and Patients' Concerns

Kamran Bagheri Lankarani[1], Marjan Roozitalab[2], Zahra Gholami[1], Mohammad Yousefi[3], Sulmaz Ghahramani[1,*]

[1] Health Policy Research Center, Institute of Health, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran
[2] Clinical Affairs, Shiraz University of Medical Sciences, Shiraz, Iran
[3] Department of Medicine, School of Medicine, Semnan University of Medical Sciences, Semnan, Iran

[*] **Corresponding Author:**
Sulmaz Ghahramani, MD
Health Policy Research Center, Institute of Health, Shiraz University of Medical Sciences, Building No 2, Eighth Floor, School of Medicine, Zand Avenue, 71348-45794

Tel :+98 7132309615
Fax :+98 7132309615
Email: suli.ghahraman@gmail.com

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ABSTRACT

BACKGROUND:
During the coronavirus disease 2019 (COVID-19) pandemic, it is imperative to focus on the concerns of patients with chronic diseases regarding the influence of such conditions and medications prescribed for this purpose on their susceptibility to COVID-19 and its severity. This study aimed to evaluate COVID-19 incidence rate, patients' concerns, sources of information, and medication compliance in a cohort of patients suffering from inflammatory bowel disease (IBD).

METHODS:
In this prospective cohort study, 214 confirmed cases of IBD were followed up within 8 months up to December 20, 2020. In the confirmed cases of COVID-19, the interviews were repeated 3 months later to assess the post-COVID-19 symptoms and conditions.

RESULTS:
Among 214 patients with IBD, 113 cases (52.8%) were female, and 169 individuals (79%) were suffering from ulcerative colitis (UC). The mean±SD scores of commitment to standard preventive guidance on COVID-19 were 81.6±19. Moreover, 147 patients (69%) had further stated at least one critical apprehension. The main sources of their information on COVID-19 were physicians (n=89, 41.5%) and websites (n=71, 33.1%). In addition, 10 patients with IBD were diagnosed as confirmed cases of COVID-19, one of them expired due to severe acute respiratory syndrome (SARS).

CONCLUSION:
The incidence of COVID-19 in the cohort of the patients with IBD in this study was broadly comparable to the general reference population. Tight adherence to physical distancing, and if possible, encouragements of patients with IBD to do remote work along with the provision of virtual care to them cannot be overemphasized. Physicians and websites can also play crucial roles in providing accurate information to patients affected with IBD, especially in terms of reassurances for medication compliance.

KEYWORDS:
Inflammatory bowel disease; COVID-19; Pandemic; Concern; Cohort study.

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INTRODUCTION

The outbreak of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) with the resultant SARS, a viral respiratory disease, was announced as a

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global pandemic by the World Health Organization (WHO) in March 2020.[1] The total confirmed cases also rapidly soared and reached more than 100 million worldwide by January 24, 2021.[2] The incidence and mortality rates of the coronavirus disease 2019 (COVID-19) are still increasing especially among the elderly, individuals with compromised immune systems, and patients with comorbidities; thus, it is a major global health concern.[1,2] The symptoms of patients also vary from asymptomatic to mild symptoms such as fever, cough, acute respiratory distress syndrome (ARDS), shock, and even death.[1]

It has been estimated that 15% of the patients affected with COVID-19 might experience gastrointestinal (GI) symptoms,[3] including diarrhea, nausea/vomiting, loss of appetite, as well as abdominal discomfort/pain. Such symptoms can be confusing in chronic GI conditions such as inflammatory bowel disease (IBD), as a non-specific intestinal disorder of the deregulated immune system that is classified into two main groups, namely, ulcerative colitis (UC) and Crohn's disease (CD).[4] Patients with IBD also suffer from chronic GI conditions characterized by periods of remission and flare (namely exacerbations). Due to the chronic nature of IBD, these patients are susceptible to mental health disorders, including anxiety. The COVID-19 pandemic has further worsened their mental health status as many of them receive immunosuppressants, which may have effects on their susceptibility to COVID-19 and its severe forms.[5] This elevated anxiety may be predisposed to flare, while some evidence indicates that there have been higher rates of medication non-adherence in patients with IBD, which may exacerbate the disease.[6,7] Furthermore, the associated GI symptoms of COVID-19 may mimic the flare of IBD and this can result in confusion in their management, especially in those eligible for self-care.

No specific guidance has been provided so far for preventive measures in patients with IBD during COVID-19 pandemic.[8] Current evidence implies that the prevalence of IBD and the susceptibility of patients affected with this condition to COVID-19 are comparable with those of the general population.[8-11] While high doses of corticosteroids increase mortality due to COVID-19 in these patients, the use of biologic monotherapy seems to have a protective effect, probably due to the control of cytokine storm-driven inflammation.[12] In a case series from Iran, conducted early in the pandemic, 51 patients with IBD suffering from COVID-19 had been accordingly reported, but the incidence rate had not been specified.[13]

To date, there is a paucity of data on the concerns of patients with IBD and the impact of the COVID-19 pandemic on their self-care. The present study aimed to reflect on COVID-19 incidence, patients' concerns, sources of information, and medication compliance in a cohort of patients with IBD from May to December 20, 2020. This prospective cohort study could thus help assess the incidence rate of COVID-19 in patients with IBD and address their challenges during this pandemic.

MATERIALS AND METHODS

Patient Recruitment

A list of phone numbers of the patients with IBD admitted to six referral hospitals during the last 8 years as well as a list of patients referred to the IBD Outpatient Referral Clinic based in the city of Shiraz, Iran, was utilized. Duplicates were further removed. The census method was also used for sampling. Upon ethical approvals, the patients were called through the provided phone numbers and invited to have a phone-based or a face-to-face interview. The interviews were completed in the IBD Outpatient Referral Clinic in a private room, adhering to the COVID-19 preventive protocols (only in 20 patients). The time of recruitment was from early May to late June 2020. The inclusion criteria were the diagnosis of IBD based on clinical, endoscopic, and/or radiological imaging along with pathological validation,[14] confirmation of the disease by a gastroenterologist, and willingness to participate in the study (in the cases age under 18 and the tendency of parents). The exclusion criterion was infection with COVID-19 at the beginning of the study.

Among the 550 registered phone numbers, 232 patients responded, and 214 agreed to participate in this study. No patient was missed during the follow-up.

Data Collection

An expert nurse conducted the interviews with the patients and completed the paper-based data collection form, comprised demographic characteristics information (age, sex, level of education, and occupation), comorbidity, personal behaviors including smoking, opium and alcohol use, extraintestinal manifestations, as well as

current IBD treatments. Comorbidity included self-reported diseases, for which the patients were regularly taking medications, such as hypertension, diabetes, hyperlipidemia, cardiovascular disease (CVD), stroke, liver disease, lung disease, kidney disease, and cancer. The extraintestinal manifestations also encompassed self-stated ones (at least) such as primary sclerosing cholangitis (PSC), erythema nodusom (EN), pyoderma gangrenosum (PG), ankylosing spondylitis (AS), as well as ocular, joint, and pulmonary involvement. Close-ended questions regarding the symptoms of the patients with IBD during the COVID-19 pandemic and coronavirus infection status were further addressed. The patients were also asked to score their commitment to the standard preventive guidance on COVID-19, whether they had discontinued their medications without consultation with their physicians during the COVID-19 pandemic or not, and then to express their main concerns during the pandemic about their disease through a semi-structured questionnaire.

To observe commitment to the standard preventive measures on COVID-19 based on the national guidelines, the patients were asked: "In your opinion, how much do you follow the standards of care announced in the media or by your physician/nurse such as restricting unnecessary travels/observing social distancing/having no contacts with infected people/washing hands/using a mask, etc.? For all the standards, they could thus give a score between zero and one hundred to themselves.

Upon the completion of the questionnaire, 13 bullets were provided on the necessary protocols they had to keep in mind, and some recommendations on the COVID-19 pandemic were delivered to the patients. The patients were particularly assured that they would receive the required services that fully adhered to the standard protocols, including treatments, medications, diagnostic tests, and hospital admissions.

To reduce the sample loss in the follow-up stage of this study, a group was created for the patients on WhatsApp Messenger, wherein they could raise their questions from physicians, individually or in-group. Furthermore, live sessions on Instagram were held to teach the patients about their disease, infection prevention, as well as considerations to have healthier lifestyles during the pandemic.

Follow-Up

The patients were followed up through phone calls and messages on four occasions (every two months for four times) and were then asked to report any new-onset symptoms in favor of COVID-19 or the confirmed cases of COVID-19 until December 20, 2020. The confirmed COVID-19 infection was accordingly defined as positive reverse-transcription polymerase chain reaction (RT-PCR) results. Afterward, in confirmed cases of COVID-19, the data about the possible routes of transmission, the signs and symptoms, and the way the treatments had been followed were collected. Three months after being infected with COVID-19, another interview was performed to assess post-COVID-19 symptoms and conditions. At this stage, four questions were addressed to reflect on the effect of COVID-19 on the physical, mental (including anxiety, stress, and depression), and economic status of the patients. The physical health status was then assessed by asking about any remaining symptoms after being infected. Anxiety, stress, and depression were also inquired with their feelings after the resolution of the infection and if they needed to refer to a psychiatrist and take medications.

The data of the phone-call follow-ups were consequently validated through checking the COVID-19 registry of the admitted patients for IBD as well as those admitted to critical care units or expired due to the COVID- 19.

Statistical Analysis

Descriptive statistics were employed to demonstrate mean/SD for the quantitative data, and frequency and percentage were employed to describe the qualitative ones using the SPSS software (ver. 18.0) (SPSS Inc., Chicago, IL, USA).

Ethical Considerations

This study was conducted in accordance with the Declaration of Helsinki (DoH) and was done after receiving approvals from the Ethics Committee of Shiraz University of Medical Sciences, Shiraz, Iran (IR.SUMS.REC.1399.1063). For the inclusion of the participants,

a signed informed consent form was provided by all participants prior to the study.

RESULTS

Among the 214 patients with IBD, 113 patients (52.8%) were women. 169 individuals (79%) had suffered from UC, and 45 patients (21%) had been affected with CD. Moreover, six female patients (5.3%) were pregnant on the first interview. Mean±SD values of the age of the patients were 38.3±15.2 years. Moreover, 15 patients (7%) were under the age of 18 years. In addition, 14 (6.5%) and 72 (33.6%) patients were illiterate and unemployed, respectively (table 1).

The mean±SD scores of commitment to standard preventive measures on COVID-19 (0-100) were 81.6±19.

Once asked about the main source of information with regard to IBD during the pandemic, the patients pointed out a combination of sources (namely, 13 different sources), while the main sources were physicians (n=89, 41.5%) and websites (n=71, 33.1%) (Table 1).

Table 1: Characteristics of eligible patients with IBD

Sex	Male	101 (47.2)
	Female	113 (52.8)
Education	Illiterate	14 (6.5)
	Educated (up to diploma)	134 (62.7)
	University	66 (30.8)
Occupation	Employed	25 (11.7)
	Retired/ unable to work	73 (34.1)
	Student	16 (7.5)
	Housewife	28 (13.1)
	unemployed	72 (33.6)
Main sources of information about their disease	Physician	90 (42 %)
	Internet	71 (33.2%)
	Physician and Internet both	22 (10.3%)
	Other sources*	31 (14.5)
Pattern of medical treatment**	Mesalazine/sulfasalazine	135 (63%)
	Corticosteroids	76 (35.5%)
	Immunomodulators (azathioprine, 6-MP, MTX)	51 (23.8%)
	Anti-TNF	36 (16.8%)
	Pain killers***	82 (38%)
	Supplement ***	86 (40%)

*Other sources of information include different combinations of books, television and, other people rather than physicians.
** Each patient might use more than one of the mentioned medications.
*** Regular use during last 3 months
Anti-TNF, anti-tumor necrosis factor-alpha therapy. MTX, Methotrexate. 6-MP, 6 Mercaptopurine

Current IBD Treatment and Medication Discontinuation Pattern

At least one comorbidity and extraintestinal manifestation were stated by 62 (29%) and 66 (30.8%) patients, respectively. The current smoking and/or water pipe and alcohol use were further reported by 31 (14.5%) and six (2.8%) patients, respectively.

The patients with IBD had taken different combinations of medications while 76 patients (35.5%) had used corticosteroids, 51 individuals (23.8%) had received immunomodulators (e.g. azathioprine, methotrexate [MTX], or 6-mercaptopurine [6-MP]) and, 36 patients (16.8%) had received anti-tumor necrosis factor-alpha therapy (anti-TNF) (table 1). Of the 214 patients, 77 (36%) were on combination medical therapy, 117 individuals (54.7%) were receiving monotherapy, and 20 patients (9.3%) had taken no medications or had discontinued them without consultation with their physicians.

Asking whether they had discontinued the use of medications without consultation with their physicians, 28 patients (13%) responded "Yes". Of them, 13 patients (6%) had discontinued mesalazine/sulfasalazine, and five individuals (2.3% of all patients but 13.8% of those receiving anti-TNF) had discontinued anti-TNF (table 2).

During the follow-up, four patients expired. One patient died following a car crash, one died because of liver cancer, one patient expired after total colectomy, and finally, one patient died due to COVID-19. The last patient was a 55-year-old man who expired due to COVID-19 with comorbidities of hypertension, hypothyroidism, and CVD.

Main Concerns of Patients with IBD during COVID-19

The main concerns about IBD during the COVID-19 pandemic in the patients' views were stated in different combinations. Totally, 147 individuals (68.7%) reported at least a case of critical apprehension. Of the patients with IBD who had felt concerned, 54 (36.7 %) had one concern, 70 (47.6%) expressed two concerns, 20 (13.6%) reflected on three concerns, and three cases

Table 2: Top three concerns and medication discontinuation pattern, with no consultation with physicians in patients with IBD

Concerns*	Admission in hospital**	82 (38.3%)
	Unavailability of diagnostic modalities ***	24 (11.2%)
	Having the prescription of required medications	21(9.8%)
	Unavailability of required medications	16(7.5%)
	Interactions between medication and COVID-19	6(2.8%)
	Total	147 (68.7 %)
Medication discontinue	Mesalazine/sulfasalazine	13(6%)
	Corticosteroids	4(1.9)
	Anti-TNF (Adalimumab or Infliximab)	5(2.3%)
	Immunomodulators (azathioprine, 6-MP, MTX)	1(0.5%)
	other£	5(2.3%)
	Total	28 (13%)

Data presented as N (%)
*Data calculated as stated as only concern or in combination with other concerns by the patient.
** including the lack of enough bed or acquire of COVID-19 infection during hospitalization
*** including endoscopy, colonoscopy
£combination of medications discontinued
Anti-TNF, anti-tumor necrosis factor-alpha therapy. MTX, Methotrexate. 6-MP, 6 Mercaptopurine

(2.1%) had four concerns. All the concerns were then ranked, and 27 combinations were identified. The top three concerns were (a) concerns related to admission to hospitals, including no spare bed capacity or acquisition of COVID-19 during hospitalization, (b) concerns about the unavailability of diagnostic modalities including endoscopy and colonoscopy, and (c) concerns associated with prescription of required medications. The concerns, which had more than five responses per question, are presented in table 2.

Confirmed Cases of COVID-19 with IBD

On June 4, 2020, no patient out of the 100 cases recruited in the study acquired COVID-19.[12] Afterward, 10 patients were diagnosed with the confirmed COVID-19 infection during the next follow-ups until December 20, 2020. All the patients had remained in remission before being infected. Nine patients did not need ICU admission and survived after infection, and just one patient expired. The deceased patient was a 55-year-old man with CD and PSC. Moreover, he had three comorbidities, including hypertension, hypothyroidism, and CVD (undergoing a coronary artery bypass graft [CABG] surgery in the previous year). He had also been admitted to an intensive care unit (ICU) due to ARDS, and died 9 days later. Other nine patients had recovered without significant complications. In this sense, one patient had developed depression and anxiety due to the death of his mother and wife following being infected with COVID-19. The characteristics of the patients with IBD and COVID-19 are presented in table 3.

Based on the official data published by Shiraz University of Medical Sciences, Shiraz, Iran (https://sums.ac.ir/page-Main/fa/290/descList-dorsaetoolsenews/42341-G857) on the confirmed cases of COVID-19, the crude incidence rate of the COVID-19 pandemic in Fars Province until December 20, 2020, was 31.7 in 1000 population (note: the population of Fars Province: 5,006,000 people, and the confirmed cases of COVID-19: 158,800). In the same period, the crude incidence rate of COVID-19 in the cohort of 214 patients with IBD was 46.7 in 1000 cases. The mortality rate of the patients with IBD affected with COVID-19 was 10%.

Comparison of COVID-19 Positive vs. Non-COVID-19 Patients

The mean±SD values of age of the positive COVID-19 cases were 37.8±11.9 vs. 38.4±15.4 in the non-COVID-19 patients with IBD. Of the patients with COVID-19, four patients (40%) had used corticosteroids (5 mg daily), while 50 patients without COVID-19 (24.5%) had taken them in variable doses. As well, seven patients with COVID-19

Table 3: *Characteristics of patients with inflammatory bowel disease and COVID-19*

	1	2	3	4	5	6	7	8	9	10
Age	43	32	30	31	23	27	54	39	59	55
Sex*	M	F	F	M	M	M	M	M	M	M
Disease type	UC	UC	UC	CD	CD	UC	UC	UC	CD	CD
Presenting symptom of COVID-19**	Fever, chills, dyspnea, nausea, and vomiting	Fever, dyspnea, headache	Fever, fatigue, diarrhea	Diarrhea, fever, chills	Fever, bloody diarrhea,	Fever, fatigue, abdominal pain, and diarrhea	Fever, fatigue, diarrhea, dyspnea	Fever, chills	Cough, nausea	Cough, dyspnea, bloody diarrhea
Possible route for acquiring of infection	In hospital (patient is a nurse)	Hospital (for receiving the treatment)	Family gathering	Hospital (for receiving the treatment)	Don't know	In the workplace (patient is a pharmacist)	Family gathering	In the workplace (patient is bus driver)	Don't know	In the workplace (patient worked in an office)
Duration of symptoms	14 days	16 days	5 days	10 days	15 days	10 days	14 days	3 days	2 days	16 days till death
Hospital admission	No	No	No	No	Yes	No	No	No	No	Yes ICU
Commitment to COVID-19 behavioral guidance	95	80	80	40	80	85	90	50	80	70
Medications***	Corton, Mesalazine/ sulfasalazine, Anti-TNF	Corton	Mesalazine/ sulfasalazine, azathioprine, Anti-TNF	Mesalazine/ sulfasalazine, azathioprine	Corton, Mesalazine/ sulfasalazine, azathioprine, Anti-TNF	Mesalazine/ sulfasalazine, azathioprine, Anti-TNF	Corton, Mesalazine/ sulfasalazine	Mesalazine/ sulfasalazine, azathioprine	azathioprine, Anti-TNF	Mesalazine/ sulfasalazine
3 months after COVID-19										
Any Remnant symptom/s	Fatigue	Mild Dyspnea	Prolonged diarrhea (2 months)	None	None	No	Diarrhea continued (1.5 months)	No	No	Death€
Anxiety and stress****	No	No	No	None	None	No	Yes	No	No	Death
Depression****	No	No	No	None	None	No	Yes	No	No	Death

*M, Male, and F, Female
** new onset of symptoms
***Medication consumption before acquire of COVID-19 infection
**** New developed symptoms for which the patient has to refer to psychiatrist and/or uses medication
€ patient died 9 days after ICU admission.
Anti-TNF, anti-tumor necrosis factor-alpha therapy
ICU: Intensive care unit

(70%) had further consumed a combination vs. 70 patients without COVID-19 (34.3%). At least one comorbidity had been stated by four patients with COVID-19 (40%) and 58 patients without COVID-19 (28.4%).

None of the COVID-19 positive patients had discontinued their medication use, and the mean score of adherence to preventive measures (0-100) was 72 in the COVID-19 positive vs. 81.9 in the individuals without COVID-19. The concerns had also been stated by 70% of both groups at the onset of the study.

DISCUSSION

The crude incidence rate of COVID-19 (46.7 in 1000) in the cohort of 214 patients with IBD was broadly similar to that of the general population of Fars Province (31.7 in 1000 population). It is noteworthy that the mean age of the patients with IBD infected with COVID-19 was lower than the overall mean age of all COVID-19 patients across Iran.[15,16] These findings were comparable to the results of recent studies,[17,18] suggesting that the patients with IBD did not seem to be more susceptible to COVID-19.[19, 20] Despite the early time of the pandemic, in which reports were indicative of uneventful COVID-19 in patients with IBD in China and Italy until March, in Greek up to April, and in Iran until June 2020[12,21-24] recent studies are increasing on IBD cases affected with the pandemic.[25, 26]

The comparable incidence of COVID-19 in the patients with IBD and the general population despite receiving immunosuppressants affecting their susceptibility to infection [27] could be the beneficial effect of anti-inflammatory medications received on the cytokine storm phase of COVID-19 or acquisition of pneumonia [11, 17, 28-30] as well as underreporting and underdiagnoses due to the mild course of COVID-19 in the patients with IBD.[11, 17,31] Another explanation for the comparable incidence of COVID-19 in the patients with IBD might be attributed to the higher level of health warnings by healthcare professionals, along with the higher adherence to standard protocols by these patients.

In this study, the patients also self-stated their commitment to COVID-19 standard protocols (81.6 from 100), which was acceptable, as good as a self-stated right practice by the general population in similar settings during the COVID-19 pandemic.[32] Although it seems that the patients with IBD are more concerned and even have fears of being infected, most of these patients wash their hands more frequently than before and stay in more than the general population.[7]

The main concerns identified by the patients with IBD in this study were mostly related to the spare bed capacity in hospitals and diagnostic/therapeutic modalities, prescription of the required medications, along access to essential medications. Interactions between medications and COVID-19 were only observed as concerns in six cases. However, the main apprehension in Germany was merely the fear of infection with COVID-19 as a negative effect of medications in patients taking immunosuppressants.[7] This different pattern of concern might be in part due to variations in the health literacy of the patients or risk communication policies in these two contexts. This calls for integrated and inter-sectoral collaboration and proper risk communication messages by healthcare officials. In the initial event communication, officials should thus minimize uncertainty, increase self-efficacy, and reassure the general population and infected groups.[33] It is of utmost importance not to over-reassure, but assurance of patients with chronic disease who are more vulnerable is of importance, so they do not feel hopeless or helpless.

Despite the previous research laying more emphasis on patients with IBD affected with COVID-19 in older age,[10,34] the study findings revealed that most of the patients were young or middle-aged and had acquired the infection through exposure in the workplace or contacts in family gatherings or hospitals (while receiving treatments). The pattern of infection also had practical implications for healthcare workers and health policy planners to warn patients with IBD have tight adherence to social distancing (namely, avoid crowded places)[20,31] and if possible, encourage these individuals to have remote work during the COVID-19 pandemic.

Being affected through hospital contacts in the receivers of medical treatments implies that virtual care delivery as an alternative to face-to-face medical care services should be enriched.[35] The use of virtual care provision, such as telemedicine for patients with IBD, in need of continuous medical care, would accordingly enhance the quality of care and minimize physical exposure to COVID-19.[35-39]

The presenting symptoms of almost all patients with IBD affected with COVID-19 were fever and/or GI disorders, which might be confused with IBD flare, corroborating that all patients with a doubted IBD flare should be tested to exclude COVID-19.[20] A study in Iran had further reported 51 patients with IBD having COVID-19,[15] but the characteristics of such patients in Iran have not been precisely demonstrated yet. These patients were also younger than the non-COVID-19 cases and had more frequent comorbidity. The patients with IBD and COVID-19 had probably used corticosteroids and combination therapy and had lower adherence to preventive standard guidance.

The main sources of information about IBD during the pandemic in the context of this study were physicians and websites, while television and online news sites had been highlighted in the study in Germany as the sources of guidance.[7] Physicians and websites as the main sources of information to the patients with IBD can accordingly have practical inferences for health policy-makers. Patients also rely on their physicians, so they can play crucial roles in providing accurate information to these individuals. On the other hand, websites might disseminate inaccurate information, leading to inappropriate use of medications or even discontinuation of certain ones.

In this cohort, approximately 87% of the patients had medication compliance, while this seemed non-satisfactory compared with more than 95% adherence rate in the study in Germany.[7] The lower medication compliance was thus asked about as they discontinued medication use without consultation with their physicians during the COVID-19 pandemic. Therefore, this question would adjust non-adherence to medication and treatment, which could be seen in chronic diseases such as IBD. This calls for actions by healthcare professionals, especially physicians and managers of scientific cyberspace, because patients rely on them more.

The case-fatality rate of COVID-19 in this cohort of patients with IBD was 10% and higher than the overall rate of the patients with IBD affected with COVID-19,[26] however, the study results might be restricted by small sample size.

Although this study was limited to one of the provinces of Iran, the cohort nature of the study could strengthen the results. In addition, this study was among the first attempts in Iran in which the concerns of patients with IBD during the COVID-19 pandemic, the characteristics of patients with IBD and COVID-19, as well as three months of follow-up were delineated. Most patients had no severe remaining symptoms 3 months after COVID-19, but two patients complained about prolonged diarrhea (1.5-2 months), one patient had fatigue, and one had mild dyspnea. Of note, depression and anxiety were not frequent after 3 months.

CONCLUSION

The incidence rate of COVID-19 in the cohort of the patients with IBD in this study was broadly comparable to the general population of Fars Province, Southern Iran. The presenting symptom of the patients with IBD and COVID-19 might be confused with the IBD flare. Tight adherence to physical distancing, including avoidance of crowded places, and if possible, encouragements for patients with IBD to have distance work cannot be overemphasized. Risk communication messages also need to assure such patients until they do not feel hopeless or helpless with regard to the availability of the required care, including diagnostic and therapeutic modalities. Physicians and websites can also play crucial roles in providing accurate information to these patients, especially in terms of medication compliance.

ETHICAL APPROVAL

There is nothing to be declared.

CONFLICT OF INTEREST

The authors declare no conflict of interest related to this work.

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