



COVID-19 Vaccination in Patients with Inflammatory Bowel Disease: A Survey from China

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Abbreviations

COVID 19	coronavirus disease 19
ECCO	European Crohn's and Colitis Organisation
IBD	inflammatory bowel disease
mRNA	messenger ribonucleic acid
SARS-CoV-2	severe acute respiratory syndrome coronavirus 2

To the Editors,

We read with interest the article by Bénédicte Caron et al., who performed a survey to assess the acceptance of COVID-19 vaccination among patients with inflammatory bowel disease (IBD) [1]. They found that half of the patients with IBD wished to be vaccinated against SARS-CoV-2. But we reached different conclusions via a questionnaire including patient characteristics and the acceptance of COVID-19 vaccination among patients with IBD at our IBD center.

A total of 218 patients (65 patients with Crohn's disease and 153 patients with ulcerative colitis) participated in the questionnaire, including 85 (38.99%) women and 133 (61.01%) men (Table 1). The median age of patients was 34.2 years; 23.85% were current smokers, 65.6% were nonsmokers, and 10.55% had given up smoking. One hundred eighty-four (84.4%) patients reported that their disease was in a clinical remission period based on clinical symptoms, and 34 (15.6%) patients had symptoms including fever, abdominal pain, diarrhea, hematochezia, and vomiting. These patients were treated with 5-aminosalicylic acid (5-ASA; 51.83%), corticosteroids (4.13%),

immunosuppressants (5.04%), biologic therapy (36.24%), and other treatments (2.75%).

A minority of patients (38.53%) received a COVID-19 vaccine, and 61.47% did not receive a COVID-19 vaccine. There was no significant difference with regard to gender, disease type, course of disease, or disease activity between these two groups. But the proportion of patients aged > 40 and smokers was higher in the vaccinated group than in the non-vaccinated group. The proportion of patients treated with 5-ASA was higher in the vaccinated group than in the non-vaccinated group.

The main reasons among patients who received the COVID-19 vaccine were as follows: 89.29% of patients believed that the vaccine protects against SARS-CoV-2 infection, 70.24% of patients desired to return to normal life, and 22.62% of patients believed in herd immunity. Twenty-three patients (27.38%) believed in social responsibility, and 67 patients (79.76%) believed that COVID-19 vaccines had a promising safety profile. The main reasons among patients who did not receive the COVID-19 vaccine were as follows: 88.06% of patients were afraid of the risk of adverse reaction to vaccine, and 33.58% of patients believed that the vaccine was being developed too quickly. Twenty-one patients (15.67%) were not confident in the vaccine research and development process, 37 patients (27.61%) had a personal history of allergic reactions, 18 patients (13.43%) believed that the vaccine would not work, 12 patients (8.96%) were disappointed that they did not have a choice between vaccines, and eight patients (5.97%) were not confident in the pharmaceutical industry. In addition, 51.49% of patients believed that the long-term safety of vaccines was unknown, 63.43% of patients believed that they had a low risk of becoming infected with SARS-CoV-2, 38.06% of patients were not confident in how long protection would last after vaccination, and 70.9% of patients did not receive COVID-19 vaccine because their doctor had not recommended a COVID-19 vaccine to them.

In conclusion, we found that the majority of patients with IBD in China did not receive a COVID-19 vaccine. The

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Table 1 Demographic and clinical features of IBD patients

	Vaccinated	Not vaccinated
Patients	84 (38.53%)	134 (61.47%)
<i>Gender</i>		
Male	52 (61.90%)	81 (60.45%)
Female	32 (39.10%)	53 (39.55%)
<i>Disease</i>		
CD	23 (27.38%)	42 (31.34%)
UC	61 (72.62%)	92 (68.66%)
<i>Age</i>		
≤ 16	8 (9.52%)	17 (12.69%)
16–40 (> 16, ≤ 40)	49 (58.33%)	97 (72.39%)
40–65 (> 40, ≤ 65)	21 (25%)	18 (13.43%)
> 65	6 (7.14%)	2 (1.49%)
<i>Smoking status</i>		
Never smoked	47 (55.95%)	96 (71.64%)
Smoking	29 (34.52%)	23 (17.16%)
Given up smoking	8 (9.52%)	15 (11.19%)
<i>Course of disease</i>		
≤ 2 years	26 (30.95%)	48 (35.82%)
2–5 years (> 2 years, ≤ 5 years)	36 (42.86%)	53 (39.55%)
5–10 years (> 5 years, ≤ 10 years)	19 (22.62%)	22 (16.42%)
> 10 years	3 (3.57%)	11 (8.21%)
<i>Therapy</i>		
5-ASA	62 (73.81%)	51 (38.06%)
Corticosteroid	3 (3.57%)	6 (4.48%)
Immunosuppressant	2 (2.38%)	9 (6.72%)
Biologic therapy	16 (19.05%)	63 (47.01%)
Other treatment	1 (1.19%)	5 (3.73%)
<i>Disease activity</i>		
Remission period	65 (77.38%)	119 (88.81%)
Relapse period	19 (22.62%)	15 (11.19%)
<i>Main reasons for intending to get COVID-19 vaccine</i>		
Protection against SARS-CoV-2 infection	75 (89.29%)	–
Promising safety profile	67 (79.76%)	–
Social responsibility	23 (27.38%)	–
Herd immunity	19 (22.62%)	–
Desire to return to normal life	59 (70.24%)	–
<i>Main reasons for not intending to get COVID-19 vaccine</i>		
Risk of adverse reaction to vaccine	–	118 (88.06%)
Personal history of allergic reactions	–	37 (27.61%)
The vaccine will not work	–	18 (13.43%)
Low risk of being infected with SARS-CoV-2	–	85 (63.43%)
Unknown long-term safety	–	69 (51.49%)
Concern that the vaccine is being developed too quickly	–	45 (33.58%)
Not confident in vaccine R&D process	–	21 (15.67%)
No information about how long protection lasts after vaccination	–	51 (38.06%)
No choice between vaccines	–	12 (8.96%)
Don't trust the pharmaceutical industry	–	8 (5.97%)
Doctor has not recommended a COVID-19 vaccine to me	–	95 (70.90%)

CD Crohn's disease, UC ulcerative colitis, R&D research and development

main reasons include the risk of adverse reaction to vaccine, low risk of being infected with SARS-CoV-2, and no recommendations regarding a COVID-19 vaccine by a doctor.

Reply

We thank Dai and colleagues for their letter. In their cohort, the majority of patients with inflammatory bowel disease (IBD) in China (61.47%) did not receive a coronavirus disease 19 (COVID-19) vaccine. The main reasons include the risk of adverse reaction to vaccine, low risk of infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and no recommendation regarding a COVID-19 vaccine by a doctor. It is not known whether health care professionals received recommendations regarding COVID-19 vaccination. In our study, half of patients with IBD wished to be vaccinated against SARS-CoV-2, and this rate was similar to that reported in the French general population [1]. In Italy, a survey measured the acceptance of anti-SARS-CoV-2 vaccination in an IBD population, and the proportion of patients willing to be vaccinated against SARS-CoV-2 was 53.6%, which is similar to our cohort [2]. The high rate of vaccine acceptance in Europe could be explained, at least in part, by the recommendations of the European Crohn's and Colitis Organisation (ECCO) task force to use the mRNA (messenger ribonucleic acid) vaccine to vaccinate IBD patients, published in February 2021 [3]. In addition, the difference in adherence to COVID-19 vaccination between Europe and China might be partly attributable to cultural and socioeconomic discrepancies. When we performed the survey in the French IBD population, the third wave of the COVID-19 pandemic in France had just begun. Perhaps the population in China did not perceive the need for vaccination due to the low incidence of COVID-19 when they performed their survey. The rate of COVID-19 vaccination intent in the general population in China is unknown. To improve COVID-19 vaccination coverage and raise the levels of population immunity, in particular in the IBD population, national and international recommendations, and culturally sensitive and appropriate communication to encourage their uptake, are needed.

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Declarations

Conflict of interest The authors declare that they have no competing interests.

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