DOI: 10.1111/apt.16900

AP&T Alimentary Pharmacology & Therapeutics WILEY

Letter: association between COVID-19 and inflammatory bowel disease—Authors' reply

We thank Chen et al for their valuable comments regarding our recent paper.[1,2]

Please find the selection criteria for COVID-19 positivity included at the end of this letter. These criteria have been supported and purported by the TriNetX database. Regarding inclusion criteria for IBD, many published database studies rely on ICD codes alone for identification of IBD cohorts; and strategies involving only ICD diagnosis codes have achieved >90% positive predictive value in identifying IBD cohorts.[3,4] In order to achieve sufficient confidence in our cohort, in addition to ICD diagnosis codes, we included the presence of IBD medications in our definition, thus making the criteria more stringent. We opted against further addition of endoscopy procedures as not all IBD patients undergo endoscopy when hospitalised.

Our data and analysis spanned the earlier phase of the pandemic, and we included patients until February 2021; this allowed us to have a longer duration of follow-up per patient and thus address our questions regarding de novo IBD as well as clinical outcomes after COVID-19 with more certainty. A small minority of patients had received the COVID-19 vaccines by that time. Therefore, studying the impact of individual vaccine status on outcomes of COVID-19 disease was not feasible at the time of analysis. Recent data have now pointed towards safety of COVID-19 mRNA vaccines in patients with IBD, and we agree with Chen et al. that patients with IBD are encouraged to receive the SARS-CoV-2 vaccine.[5,6]

In regard to antibiotics, the rates of azithromycin administration, which was used for treatment in COVID-19 disease early in the pandemic, were similar in the two cohorts in our analysis; any difference in antibiotics used for other diseases in the cohorts cannot be ruled out. However, it can be postulated that the rate of antibiotic usage should be higher in the COVID-19 cohort, as they may suffer from nosocomial and other infections. However, due to lack of any increased risk of de novo IBD observed in our analysis, the potential of any confounding by antibiotic usage seems to be of minor significance to the conclusion. This would have represented a limitation if a positive effect of COVID-19 on de novo IBD had been noted.

The selection criteria codes used in the study:

1. ICD-10-CM codes U07.1 OR B34.2 OR B97.29 OR J12.81.
2. Patients were excluded if they had diagnosis code 079.89 (Other specified viral infection). This code is mapped to ICD-10 code B34.2 and B97.2, and it was excluded to prevent false positives because it is used as a catch all code sometimes for many viral infections.
3. The following LOINC codes were also used to identify COVID-19 patients with positive COVID-19 test results: 94315-9 OR 94316-7 OR 94500-6 OR 94501-4 OR 94502-2 OR 94532-9 OR 94533-7 OR 94534-5 OR 94559-2 OR 94565-9 OR 94639-2 OR 94640-0 OR 94641-8 OR 94647-5 OR 94660-8 OR 94756-4 OR 94757-2 OR 94758-0 OR 94759-8 OR 94765-5 OR 94766-3 OR 94767-1

ACKNOWLEDGEMENT

The author's declaration of personal and funding interests are unchanged from those from the original article.[2]

AUTHOR CONTRIBUTIONS

Yousaf Hadi: Data curation (lead); formal analysis (lead). Gursimran Kochhar: Conceptualization (equal); methodology (equal); project administration (equal).

LINKED CONTENT

This article is linked to Hadi et al papers. To view these articles, visit https://doi.org/10.1111/apt.16730 and https://doi.org/10.1111/apt.16814

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REFERENCES

1. Chen H-Y, Wang S-I, Chang R, Wei JC-C. Letter: association between COVID-19 and inflammatory bowel disease. Aliment Pharmacol Ther. 2022;55:1226–7.
2. Hadi Y, Dulai PS, Kupec J, Mohy-Ud-Din N, Jairath V, Farraye FA, et al. Incidence, outcomes, and impact of COVID-19 on inflammatory bowel disease: propensity matched research network analysis. Aliment Pharmacol Ther. 2022;55:191–200.
3. Jakobsson GL, Sternegård E, Olén O, Myrelid P, Ljung R, Strid H, et al. Validating inflammatory bowel disease (IBD) in the Swedish National Patient Register and the Swedish quality register for IBD (SWIBREG). 2017;52(2):216–21.
4. Everhov, Å.H., Halfvarson J., Myrelid P., Sachs M.C., Nordenvall C., Söderling J., Ekbom A., Neovius M., Ludvigsson J.F., Askling J., Olén O., 2018. 154(3): 518–528. e15, Incidence and treatment of patients diagnosed with inflammatory bowel diseases at 60 years or older in Sweden.
5. Kumar A, Quraishi MN, Segal JP, Raine T, Brookes MJ. COVID-19 vaccinations in patients with inflammatory bowel disease. 2020;5(11):965–6.
6. Kappelman, M.D., et al., Humoral immune response to messenger RNA COVID-19 vaccines among patients with inflammatory bowel disease 2021. 161(4): 1340–1343.e2.