Conclusion: The prevalence of COVID-19 infection among patients with IBD was lower than that in the general population in Canada. Severe COVID, mortality, and flare of IBD were relatively rare, while a large proportion of patients received COVID vaccination. Older age, comorbidities, active IBD disease, and systemic corticosteroid, but not immunosuppressive or biological therapy were associated with severe COVID infection.

DOP26 COVID-19 vaccine effectiveness in Inflammatory Bowel Disease patients on tumor-necrosis factor inhibitors: Real world data from a mass-vaccination campaign

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Background: Some studies have shown decreased serological response to vaccination in patients on anti-tumor necrosis factor (TNF) medications. While the large majority of these patients do seroconvert after vaccination, titers have generally been lower and one study showed reduced neutralizing and inhibitory functions. One real-world population-based study compared found no increased infection rate in anti-TNF treated patients, but infection rates were low. The low event rate mandates exploration in longer-term population-based data. We used the epi-Israeli IBD Research Nucleus (IIRN) database to explore the effectiveness of COVID-19 vaccination in IBD patients in Israel.

Methods: We included all IBD patients insured in two of the four Israeli HMOs, covering 35% of the population, by validated algorithms, and selected those who received two doses of Pfizer BNT162b2 vaccine. These were matched by date of vaccination ±3 days and demographic variables to non-IBD controls. The primary outcome was incidence of positive COVID-19 PCR following vaccination between December, 2020 to June, 2021.

Results: 12,640 IBD patients received two vaccine doses; the matched cohort included 4,946 matched pairs (total 9,892 subjects). Mean age was 50.5±16.1 years and median follow-up was 22 weeks (range 4.1–24.4). Fifteen (0.3%) vaccinated IBD patients tested positive compared with 15 (0.3%) vaccinated non-IBD controls (OR=1 [95%CI 0.49–2.05], p=1.0). Patients on anti-TNF and/or corticosteroids did not have a higher incidence of positivity – neither compared to the entire group nor to IBD patients treated with vedolizumab/ustekinumab, even after precise matching for demographics, underlying diseases and IBD severity.
Conclusion: In a large population-based cohort of IBD patients in Israel, vaccine effectiveness was equivalent to non-IBD controls and was not influenced by treatment with anti-TNF or corticosteroids. Notwithstanding previous findings of impaired serological response in anti-TNF treated IBD patients, this real-world large-scale study shows that vaccine protection is robust in IBD patients, including those on immunosuppressive medications.

DOP27
Humoral immune response after SARS-CoV-2 vaccination in patients with immune-mediated inflammatory diseases treated with immunosuppressive therapy - a Target to Bi! study

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Background: The aim of this study was to investigate the effect of various immunosuppressants on the humoral immune responses after vaccination against SARS-CoV-2 in patients with immune-mediated inflammatory diseases (IMIDs).

Methods: The Target to Bi! SARS-CoV-2 study is a multicentre study, taking place in 7 Dutch academic hospitals. Patients with the following IMIDs were recruited: Crohn’s disease (CD), ulcerative colitis (UC), autoimmune hepatitis, rheumatoid arthritis (e.g. rheumatoid arthritis), neurological (e.g. multiple sclerosis) and dermatological IMIDs (e.g. atopic dermatitis). Patients were recruited based on immunosuppressants (table 1) and previous SARS-CoV-2 infection. The control group consisted of healthy subjects and IMID patients without immunosuppressants. SARS-CoV-2 receptor binding domain (RBD) antibodies were measured 28 days after completed SARS-CoV-2 vaccination. Seroconversion was defined as anti-RBD IgG >4 AU/mL. In this abstract, we focus on therapies relevant for inflammatory bowel diseases (IBD) and present results for these treatments from patients with IBD, but also other IMIDs.

Results:

| Table 1: patient cohort | Without previous SARS-CoV-2 | Previous SARS-CoV-2 |
|-------------------------|-----------------------------|---------------------|
| Immunosuppressive therapy | No therapy | Controls |
| | | 111 | 134 |
| | Anti-TNF | 49 | 9 |
| | Methotrexate | 51 | 18 |
| | Other immunosuppressants | 125 | 19 |
| | Total | 313 | 319 |

Numbers of recruited patients with each immunosuppressant are shown in table 1. Amongst these patients, 312 patients had CD and 176 UC, the rest was diagnosed with another IMID. Seroconversion was reduced in patients receiving sphingosine 1-phosphate (S1P) modulators (all multiple sclerosis patients) while seroconversion was similar to controls in the other treatment groups. However, use of Anti-tumour necrosis factor (TNF), methotrexate, janus kinase (JAK) inhibitor monotherapy and all combination therapies (except for corticosteroids combined with other immuno-suppressants) were associated with reduced SARS-CoV-2 antibody titres. Patients with a previous SARS-CoV-2 infection had higher median antibody titres after second vaccination than those without a previous SARS-CoV-2 infection. The type of IMID did not affect seroconversion rates.

Conclusion: No immunosuppressant, registered for IBD, reduced the rates of seroconversion after vaccination against SARS-CoV-2. Some immunosuppressants were associated with lower antibody titres. However, the clinical relevance of lower antibody titres remains unknown. S1P modulators, had a clear negative impact on the humoral response against SARS-CoV-2 after vaccination. This might be relevant in the future as this therapy is currently being approved for UC. Disease aetiology did not impair immunity against SARS-CoV-2 immunity after vaccination.

Disclaimer: Absolute numbers of antibody titres and rates of seroconversion were reported at the conference and are not reported in this abstract as this might negatively impact the current submission process.

DOP28
Venous thromboembolism following discharge from hospital in patients admitted for Inflammatory Bowel Disease

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Background: Patients admitted to hospital with active Inflammatory bowel disease (IBD) are at increased risk of...