The frequency of SARS-CoV-2 infection and the impact of vaccination on the disease morbidity in Polish pediatric patients with Inflammatory Bowel Disease treated with biologic therapies.

E. Derda¹, E. Szymanska², M. Meglicka², A. Wiernicka², M. Osiecki³, J. Kierkus³
¹The Children Memorial Health Institute, Gastroenterology Hepatology Feeding Disorder at Pediatrics, Warszaw, Poland ²The Children’s Memorial Health Institute, Department of Gastroenterology- Hepatology- Feeding disorders and Pediatrics, warsaw, Poland ³The Children’s Memorial Health Institute, Department of Gastroenterology- Hepatology- Feeding disorders and Pediatrics, warsaw, Poland

Background: Little is known about morbidity of Covid-19 infection in pediatric patients with inflammatory bowel diseases (IBD) treated with biologic medications. The aim of this study was to evaluate the frequency of SARS-CoV-2 infection in children with IBD who received biologic therapies.

Methods: A prospective, observational cohort study to evaluate coronavirus disease 2019 (COVID-19) vaccination state, and its effect on the disease course among pediatric patients with IBD. The questionnaire included information concerning numbers of vaccine doses, patients’ medication and disease activity. Disease flare was defined by worsening IBD symptoms and change in IBD medications. Outcomes were stratified by vaccine type and IBD medication classes.

Results: A total of 320 children with IBD, 169 with Crohn’s disease (CD)-52,8%, 150 with ulcerative colitis (UC) - 46,9%, 1 unclassified -0,3%, responded to the questionnaire concerning COVID-19 vaccination. In our cohort 141 (49,7%) patients received biologic therapy: 13 patients (9,2%) adalimumab (ADA), 54 (38,3%) infliximab (IFX), 27 (19,1%) vedolizumab (vedo), 29 (20,6%) ustekinumab (ust), 6 - vedo + ADA (4,3%), 1 - IFX + vedo (0,7%), 11 - ust + ADA (7,8%). 32 (22,7%) patients had COVID-19 infection during biological therapy (ust 6 - 4,3%, vedo 7- 5,0%, ada 2-1,4%, ifx 12- 8,5%, ust + ada 2- 1,4%, vedo + ada 3- 2,1%). Among the patients on biologic treatment suffering from COVID-19, 25 (78,1%) children had mild course of the infection, 4 moderate (12,5%), 2 severe (6,3%), and 1 unknown (3,1%). A total of 127 (39,7%) patients received at least 1 COVID-19 vaccine, and among them 8 (6,3%) patients who received 1 dose of COVID-19 vaccine got the infection during biologic therapy. In our group, 193 (60,3%) patients have not been vaccinated against COVID-19, and 24 (12,4%) suffered from the disease during biologic therapy.

Conclusion: Based on the outcomes from our questionnaire concerning COVID-19 vaccination state on the large cohort of pediatric patients with IBD, we conclude that unvaccinated patients get sick more often than vaccinated ones, and that the use of biological treatment has no impact the frequency of covid infections or their course.