2020 Advances in Inflammatory Bowel Diseases: Vision for the Next Decade

Chairs: Stephen B. Hanauer, MD, FACG, Millie D. Long, MD, MPH, FACG, Miguel D. Regueiro, MD, FACG

P001

North-South Gradient in the Incidence of Pediatric Inflammatory Bowel Disease Along the Atlantic Coast

Rebabino Ergwart1, Hanke Rachel2, Laxman Meera2, Palomo Pablo2, Gauthap Melani2, Adamam William2, Mckemngokol Tertor2.

1University of Central Florida, Orlando, United States. 2Nemours Children’s Hospital, Orlando, United States.

BACKGROUND: Inflammatory bowel disease (IBD) represents a group of intestinal disorders, including Crohn’s disease (CD) and ulcerative colitis (UC), that involve chronic inflammation of the digestive tract. Pediatric IBD is defined when onset of symptoms and diagnosis occurs in patients 18 years or less. East-West and North-South gradients have been reported in Canada and Europe. We aimed to evaluate whether a similar gradient exists in the US among the pediatric population.

METHODS: We conducted a retrospective cohort study from January 1, 2000 to December 31, 2018 using electronic health records from one national children’s hospital that participates in the PEEDNet research network. We extracted information on patient demographics, encounters with healthcare providers, diagnoses recorded, and procedures performed during these encounters from patient’s electronic health records. The outcomes of interest include geographic location (North vs South), gender, race/ethnicity, age at diagnosis, tobacco use, socioeconomic status, and need for surgery.

RESULTS: A total of 2,409 patients 18 years of age or less met the eligibility criteria of the study; 1,818 (73.5%) non-Hispanic White, 320 (13.3%) non-Hispanic Black, 198 (8.2%), Hispanic, 60 (2.5%) Asian, and 13 (0.5%) “other.” There was no difference in the male predominance in all groups between the North and the South (55.3% vs 54.3%, P = 0.62). The incidence of IBD among the non-Hispanic Whites was greater in North (78.5% vs 72.2%, P = 0.0002). The incidence of IBD among the Hispanics was greater in the South (5.3% vs 11.4%, P < 0.0001). There was no difference in incidence of IBD among the non-Hispanic Black, Asian, or “other” group. There was no difference in incidence of CD between the North and South (68.8% vs 69%, P = 0.92), however, UC was more prevalent in the South (23.2% vs 27.3%, P = 0.02). Further breakdown of CD and UC with respect to ethnicity revealed the incidence of CD and UC in the Hispanic population is greater in the South (5% vs 10.3%, P = 0.0001; 6.2% vs 14%, P = 0.0011, respectively). There was no difference seen in non-Hispanic Whites, non-Hispanic Blacks, Asians, and “others” with respect to CD, UC or UCDC.

CONCLUSION: We demonstrate a North-South gradient in the pediatric in the non-Hispanic and Hispanic population with UCDB. There is a higher incidence of UC in the pediatric population in the South. Furthermore, there is a higher incidence of CD and UC in the Hispanic population in the South compared to the North. Further epidemiologic studies are needed to assess the racial/ethnic differences that contribute to this North-South gradient.

P002

Frequency and Causes of Prolongation of the Induction Course of Tofacitinib in Patients with Ulcerative Colitis

Knyazev Oleg1, Klyaginovna Anna1, Lishchinskaya Alina1, Kulakov Maxim1, Adamson William2, Lishchinskaya Alina2.

1Moscow Clinical Scientific Center Named After A. S. Logmow, Moscow, Russia. 2Medical Research Institute of Health Organization and Medical Management, Moscow, Russia.

BACKGROUND: Tofacitinib is a selective immunosuppressant, the first representative of the Janus kinase family inhibitors, which has a high selectivity against other kinases of the human genome. According to the results of the study, tofacitinib inhibits JAK-1, JAK-2 and in high concentrations-JAK-3 and tyrosine kinase-2. The drug is registered in Russia for the treatment of patients with ulcerative colitis. According to the instructions for medical use, in patients with incomplete response to the induction course, it is possible to conduct an additional 8 weeks of therapy at an induction dose of 10 mg 2 times a day. Aim: to identify the frequency and reasons for the need to prolong the induction course of tofacitinib in patients with ulcerative colitis.

METHODS: 35 patients with ulcerative colitis (UC) who received tofacitinib were observed in the Department of inflammatory bowel diseases. Patients were divided into two groups. Group 1 (n = 10) of patients were bio naive. The second group of patients (n = 25) had previous experience of treatment with one or more anti-TNF-α drugs. The necessity of prolongation up to 16 weeks of induction course of tofacitinib was assessed in patients with insufficient clinical response at week 8 of therapy (reduction of partial index of Mayo less than 30%) and lack of normalization of laboratory parameters (CRP, hemoglobin, FCP). The comparative analysis was carried out by the method of four-field tables using non-parametric statistical criteria.

RESULTS: In the follow-up period among group 1 UC patients (n = 10) who had not previously received anti-TNF-α drugs, the need for a prolonged induction course of tofacitinib was not required in any patient (0%). In the 2nd group of patients (n = 25), previously treated with anti-TNF-α drugs, a prolonged induction course of tofacitinib was required in 9 (36%) patients (x2=4.484, P = 0.0328).

CONCLUSION: The need for prolongation up to 16 weeks of the induction course of tofacitinib in patients with ulcerative colit is B is significantly higher in patients who have previously received one or more anti-TNF-α drugs.