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

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P001
North-South Gradient in the Incidence of Pediatric Inflammatory Bowel Disease Along the Atlantic Coast

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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 PEDIATrsearch 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; 1818 (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 4.1%, P < 0.0001). 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 = 0.001, respectively). There was no difference seen in non-Hispanic Whites, non-Hispanic Blacks, Asians, and “others” with respect to CD, UC or UDC.

CONCLUSION: We demonstrate a North-South gradient in the pediatric in the non-Hispanic and Hispanic population with IBD. 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

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BACKGROUND: Prolongation of initial treatment with tofacitinib is a common phenomenon among patients with moderate to severe ulcerative colitis (UC). The purpose of this study was to compare the effectiveness of combined therapy (local and systemic) mesenchymal stem cell (MSC) of bone marrow, in the effectiveness of combination therapy MSC (local administration) and infliximab (IFX), as therapy the IFX with immunomodulators on the healing of simple perianal fistulas in Crohn’s disease (CD).

METHODS: Seventy-five patients with CD with perianal lesions were divided into three groups depending on the method of therapy. The first group of CD patients aged 19 to 59 years (Me=29) (n = 25) received systemic and locally, as well as an anti-cytokine therapy with IFX and immunomodulators. The third group of patients with CD (n = 25) aged 20 to 62 years (Me=30) received MSC systemically and locally.

RESULTS: The comparative analysis was performed using four-field tables using non-parametric statistical criteria.

CONCLUSION: Combined cellular and anti-cytokine therapy of CD with perforaneous lesions contributes to more frequent and prolonged closure of simple fistulas, compared with MSC monotherapy and IFX monotherapy.

P003
Frequency of Hereditary and Acquired Thromboembolic Complications in Patients With Inflammatory Bowel Diseases in Moscow

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BACKGROUND: Thromboembolic complications (TC), which are one of the characteristic manifestations of inflammatory bowel diseases (IBD).

OBJECTIVE: To identify the frequency of inherited and acquired hypercoagulation factors that contribute to the development of TC in patients with IBD.

METHODS: The clinical status of 1238 IBD patients undergoing treatment in 2019 was evaluated in the Department of IBD. 748 patients with ulcerative colitis (UC) and 490 patients with Crohn’s disease (CD). In 112 patients with IBD (9.0%), clinically significant TC (venous thrombosis of the lower extremities, upper extremities) was detected. We detected clinically significant study, DNA isolated from peripheral blood lymphocytes was examined to identify molecular genetic mutations that lead to hypercoagulation.

RESULTS: Of the 112 patients with TC, 76 (67.8%) patients had UC, and 36 (32.2%) patients had Crohn’s disease. Of 112 IBD patients with clinically significant TC, 45 (40.2%) had genetic mutations that cause inflammation of the vein, increase platelet aggregation, disrupt folic acid metabolism, and increase thrombosis of the lower extremities, superficial veins and arteries.

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

P004
Combined Biological Therapy of Perianal Crohn’s Disease

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BACKGROUND: Fistulizing patients are common types of fistulas in Crohn’s disease (CD). Mesenchymal stem cell (MSC), which have immunomodulatory properties and high regenerative potential, can currently also be used for the treatment of fistula CD. Perianal fistulas are a common types of fistulas in Crohn’s disease (CD). Mesenchymal stem cell (MSC), which has immunomodulatory properties and high regenerative potential, can currently also be used for the treatment of fistula CD. The purpose of this study was to compare the effectiveness of combined therapy (local and systemic) mesenchymal stem cell (MSC) of bone marrow, in the effectiveness of combination therapy MSC (local administration) and infliximab (IFX), as therapy the IFX with immunomodulators on the healing of simple perianal fistulas in Crohn’s disease (CD).

METHODS: Seventy-five patients with CD with perianal lesions were divided into three groups depending on the method of therapy. The first group of CD patients aged 19 to 59 years (Me=29) (n = 25) received a culture of MSC systemically according to the scheme and locally. The second group of patients with CD (n = 25) aged 20 to 60 years (Me=28) received anti-cytokine therapy with IFX and immunomodulators. The third group of patients with CD (n = 25) aged 20 to 62 years (Me=30) received systemic and locally.

RESULTS: The comparative analysis was performed using four-field tables using non-parametric statistical criteria.

CONCLUSION: Combined cellular and anti-cytokine therapy of CD with perforaneous lesions contributes to more frequent and prolonged closure of simple fistulas, compared with MSC monotherapy and IFX monotherapy.