ETHNIC VARIATION OF PEDIATRIC INFLAMMATORY BOWEL DISEASE IN CANADA

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Background: Inflammatory bowel disease (IBD) is a chronic inflammatory condition of the gastrointestinal tract with highest prevalence in the Western world. Recent temporal trends in adult and pediatric populations demonstrate increasing incidence in both developed and developing countries. IBD phenotypes may differ between countries and ethnic/racial groups.

Aims: This study examined ethnic and phenotypic variation of children newly diagnosed with IBD in Canada.

Methods: The Canadian Children IBD Network established an inception cohort of children with incident IBD in 13 tertiary-care centers across Canada. Children were categorized into 9 different ethnic groups using a modified Statistics Canada classification method. Demographic characteristics, family history, place of birth, disease phenotype and activity were evaluated. Univariate regression analysis evaluated the association between ethnicity groups. Where appropriate, Wilcoxon rank sum test was used to compare groups.

Results: 886 children newly diagnosed with IBD were evaluated. The largest ethnicity groups included Caucasian (71.3%), South Asian (8.6%), Mixed Ethnicity (8.6%), Middle Eastern (3.4%), and African (3.3%). The median age at diagnosis was 12.3 years (IQR 8.8-15 y). The prevalence of IBD subtypes was as follows: Crohn’s disease (CD) 60.5%, ulcerative colitis (UC) 28.6% and IBD type Unclassified (IBD-U) 8.7%. South Asians had higher odds of UC compared to non-South Asians (odds ratio [OR] 2.2, 95%CI 1.2–3.8). Using the Paris classification for CD, the prevalence of CD phenotype was as follow: L1 15.9%, L2 19.2%, L3 39.9%, L4a 16.0%, L4b 5.4%. Using the Montreal classification for UC, the prevalence of UC phenotype was as follows: E1 7.1%, E2 4.7%, E3 8.7%, E4 54.9%. The median PCDAI score at diagnosis was 55 (IQR 35-75). The median PUCAI score at diagnosis was 55 (IQR 40–70). Caucasians had higher odds of a positive family history of IBD compared to non-Caucasians (OR 1.7, 95%CI 1.1–2.9), especially maternal history of IBD (OR 2.9, 95%CI 1.3–7.1).

Conclusions: Across ethnic groups, South Asians had higher odds of UC compared to non-South Asians. L3 was the most prevalent phenotype in CD and E4 was the most prevalent phenotype in UC. Caucasian ethnicity is associated with higher odds of a positive family history, particularly with a maternal family history of IBD. Further studies are required to evaluate the impact of ethnic variation of pediatric IBD on disease management and prognosis.
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