The Role of Clinical-Demographic Characteristics in Ophthalmic Manifestations of Inflammatory Bowel Disease

To the Editor:

The prevalence and risk factors of inflammatory ophthalmic manifestations (IOMs) of inflammatory bowel disease (IBD) are not well established.[1] Thus, it is important to produce relevant clinical demographic data to improve follow-up and treatment strategies. We conducted a prospective cross-sectional study at the Federal University Hospital Clementino Fraga Filho, Rio de Janeiro, Brazil. Our purpose was to assess the prevalence and associated clinical-demographic characteristics of IOMs among IBD patients. In total, 80 IBD patients (Crohn's disease [CD], n = 41; ulcerative colitis [UC], n = 39) were enrolled in this study and underwent ophthalmic examinations. The exclusion criteria were <18 years of age and the presence of another autoimmune disease or coexisting infectious disease. The age at diagnosis, sex, disease duration, medications, presence of extraintestinal manifestations (EIMs), tabagism, and previous bowel resection surgery were obtained from medical records. Clinical activities of CD and UC were evaluated using the Harvey-Bradshaw Index and partial Mayo Score, respectively. Fecal calprotectin was also measured 2 weeks after ophthalmic examination.

The characteristics of the study population are summarized in Table 1. There was an inconsistency between the biomarkers of inflammation and clinical disease activity because most of the patients had a positive fecal calprotectin test but were in clinical remission, suggesting subclinical intestinal inflammation.

The frequency of IOMs was higher in CD vs UC patients (9.8% and 2.6%, respectively). Three patients (2 CD and 1 UC) had anterior uveitis, 1 CD patient had diffuse anterior scleritis, and 1 CD patient had episcleritis; however, no association was found between IOMs and the IBD type ($P = 0.36$), nor between IOMs and sex or age ($P = 0.65$ and $P = 0.66$, respectively). Moreover, disease duration ($P = 0.33$), clinical activity ($P > 0.99$), fecal calprotectin ($P = 0.46$), medication ($P = 0.77$), the presence of other EIMs ($P = 0.14$), tabagism ($P > 0.99$), and previous bowel resection surgery ($P = 0.36$) were not correlated with IOMs. Previous reports[2–5] with different methodologies and study populations reported conflicting results regarding the association between these parameters and IOMs, and the results of the present study suggest the absence of a relationship between them. In conclusion, the role of these parameters in the development of IOMs has not been firmly established, and IOMs remain an unproven index of intestinal activity. However, fecal calprotectin has not been used previously to assess the relationship between disease activity and IOMs. Larger study groups should be evaluated to validate the present findings.

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TABLE 1: Clinical Demographic Data From Patients

Clinical Demographic Data	IBD (n = 80)	CD (n = 41)	UC (n = 39)	*P*
Age, mean (SD), y	50.54 (14.53)	48.54 (13.30)	52.64 (15.61)	
Age at diagnosis (≤40 y), No. (%)	53 (66)	29 (71)	24 (61)	0.38
Female, No. (%)	52 (65)	26 (63.4)	26 (66.6)	0.96
Disease duration, mean (SD), y	15.76 (8.81)	15.98 (9.09)	15.54 (8.62)	
Phenotype, No. (%)[a]				
B1: Nonstricturing and nonpenetrating		12 (29)		
B2: Stricturing		18 (44)		
B3: Penetrating		11 (27)		
Disease location, No. (%)[a]				
L1: Ileal		15 (36)		
L2: Colonic		11 (27)		
L3: Ileocolonic		9 (22)		
L4: Isolated upper disease		6 (15)		
Extension, No. (%)[a]				
E1: Ulcerative proctitis			6 (15)	
E2: Distal UC			17 (44)	
E3: Pancolitis			16 (41)	
Current medications, No. (%)[b]				
None	2 (2)	0	2 (5)	0.23
5-ASA derivates	34 (42)	3 (7)	31 (79)	<0.001
Thiopurines (AZA)	41 (51)	28 (68)	13 (33)	0.002
Methotrexate	7 (9)	4 (10)	3 (8)	>0.99
Anti-TNF therapy	20 (25)	16 (39)	4 (10)	0.003
Prednisone	11 (14)	3 (7)	8 (20)	0.08
Other EIM, No. (%)[c]				
None	49 (61)	26 (63)	23 (59)	0.81
Musculoskeletal	25 (31)	13 (32)	12 (31)	0.92
Hepatobiliary	5 (6)	1 (2)	4 (10)	0.19
Cutaneous	2 (2)	2 (5)	0	0.49
Urogenital	3 (4)	1 (2)	2 (5)	0.61
Ocular	1 (1)	1 (2)	0	>0.99
Tabagism, No. (%)				0.73
Never	49 (61)	26 (63)	23 (59)	
Prior	30 (37)	15 (37)	15 (38)	
Current	1 (1)	0	1 (2)	
Previous bowel resection surgery, No. (%)	21 (26)	17 (41)	4 (10)	0.002
Clinical activity, No. (%)				0.27
Remission	71 (89)	37 (90)	34 (87)	
Mild	5 (6)	1 (2)	4 (10)	
Moderate	4 (5)	3 (7)	1 (2)	
Fecal calprotectin, No. (%)	n = 58	n = 32	n = 26	0.13
Negative (<50 μg/g)	8 (14)	2 (6)	6 (23)	
Indeterminate (50–200 μg/g)	10 (17)	5 (15)	5 (19)	
Positive (>200 μg/g)	40 (69)	25 (78)	15 (58)	
IO-EIM, No. (%)	5 (6.2)	4 (9.8)	1 (2.6)	0.36

Abbreviation: IOM, inflammatory ophthalmic extraintestinal manifestation.
[a]Montreal classification.
[b]Twenty-seven patients were using more than 1 medication.
[c]Five patients had more than 1 EIM.