

Profile of Extra-Digestive Manifestations of Inflammatory Bowel Disease in a Hospital Setting in Libreville: A Cross-Sectional Study of 48 Cases (2019-2025)

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Abstract

Introduction: Extra-intestinal manifestations (EIMs) of inflammatory bowel disease (IBD) remain poorly documented in sub-Saharan Africa, particularly in Gabon. This study aimed to determine the epidemiological profile in patients with IBD followed at the University Teaching Hospital of Libreville (CHUL). **Materials and Method:** A descriptive and analytical cross-sectional study was conducted from January 2019 to December 2025, including 48 patients followed for IBD at the Hepato-Gastroenterology Department of CHUL. EIMs were classified as ophthalmic, rheumatological, dermatological, and hepatic manifestations. Associated factors were identified by bivariate analysis and multivariate logistic regression (threshold $p < 0.05$). **Results:** Among 48 patients included (sex ratio 2.0; mean age 37.4 ± 11.2 years; 66.7% ulcerative colitis), 79.2% presented at least one EIM. Ophthalmic manifestations were the most frequent (45.8%), dominated by ocular redness (54.5%) and photophobia (22.7%), followed by rheumatological (41.7%), dermatological (10.4%), and hepatic (2.1%) manifestations. In multivariable analysis, active disease flare remained the only factor independently associated with ophthalmic manifestations ($p = 0.03$) and Crohn's disease type was the sole independent predictor of rheumatological manifestations (OR 10.22; 95% CI [2.29 - 45.57]; $p = 0.002$). **Conclusion:** EIMs of IBD are frequent in our setting, with a predominance of ophthalmic involvement. Systematic ophthalmological screening dur-

ing active flares and enhanced rheumatological monitoring in all Crohn's disease patients are warranted.

Keywords

IBD, Extra-Intestinal Manifestations, Gabon, Epidemiology

1. Introduction

Chronic inflammatory bowel diseases (IBD) are a group of conditions marked by long-lasting inflammation of the digestive tract, with flare-ups alternating with periods of remission. They mainly include two conditions: Crohn's disease and ulcerative colitis [1] [2]. Sometimes, the clinical and histological signs don't clearly point to one diagnosis or the other, and this is referred to as "indeterminate colitis" [1]. These diseases are a real public health concern because of their rising incidence worldwide, their impact on patients' quality of life, and their potentially unfavorable progression [3]. Extra-intestinal manifestations (EIM), classically described in joint, skin, eye, and liver/gallbladder issues, occur in 6% to 47% of patients depending on the studies, and can come before, happen alongside, or develop independently of digestive flare-ups [4]-[6]. Worldwide, the most common extraintestinal manifestations (EIMs) are rheumatologic (25% to 40% of patients), followed by skin, eye, and hepatobiliary symptoms [5] [6]. Among eye conditions, episcleritis, anterior uveitis, and scleritis are the best documented forms, with prevalence ranging from 1.3% to 86.9% depending on the study and population [7]. In sub-Saharan Africa, IBD has long been considered rare [8] [9]. However, their increasing incidence, linked to epidemiological transition and urbanization, is now documented in several countries in West and Central Africa [10] [11]. MEIs, on the other hand, remain very poorly documented in this context, due to limited access to specialized technical facilities and low multidisciplinary awareness [12]. In Gabon, data on IBDs are still rare, and extra-intestinal manifestations have never been studied systematically. The aim of this study was to determine the profile of extra-intestinal manifestations in patients followed in the Hepato-Gastroenterology department at Libreville University Hospital (CHUL) for IBDs and to identify the factors associated with their occurrence.

2. Materials and Methods

2.1. Type and Study Setting

This was a descriptive and analytical cross-sectional study, conducted between January 1, 2019, and December 31, 2025, in the Hepato-Gastroenterology Department of CHUL.

2.2. Study Population

During the study period, all patients who underwent an ileocolonoscopy in the

hepatology-gastroenterology department at CHUL were screened. Patients presenting inflammatory lesions of the colonic or ileal mucosa underwent a standardized diagnostic work-up including clinical evaluation, ileocolonoscopy with systematic biopsies for histopathological examination, and abdominal imaging (ultrasound, computed tomography and/or magnetic resonance imaging) when indicated. The diagnosis of inflammatory bowel disease was established after integrating clinical, endoscopic, histopathological, and radiological findings according to current international diagnostic criteria. Only patients with a confirmed diagnosis of Crohn's disease or ulcerative colitis were included in the study.

2.3. Data Collection

Data were collected from patients' medical records and consultation reports. For each patient, the following variables were recorded: IBD type (ulcerative colitis or Crohn's disease), disease activity (active flare or remission), disease duration, ongoing treatment, and the presence of extra-intestinal manifestations. Extra-intestinal manifestations were systematically assessed through medical history, physical examination, and complementary investigations available in the medical records. Ophthalmic manifestations were initially identified during gastroenterology consultations based on ocular symptoms (red eye, photophobia, and decreased visual acuity). Patients presenting ocular symptoms were referred for ophthalmologic evaluation whenever possible. Ophthalmologic diagnoses were established by an ophthalmologist on clinical examination and classified as scleritis, uveitis, or episcleritis. Rheumatologic, dermatologic, and hepatic manifestations were identified from clinical findings, specialist consultation reports when available, and complementary investigations.

2.4. Variables of Interest

The extra-digestive manifestations were classified into four categories: 1) Eye problems: Ophthalmic manifestations included both ocular symptoms (red eye, photophobia, and decreased visual acuity) identified during gastroenterology consultation and ophthalmologic diagnoses (scleritis, uveitis, and episcleritis) established after specialist evaluation whenever available; 2) Rheumatologic issues (peripheral arthritis, spondyloarthropathies, enthesitis, osteoporosis, aseptic osteonecrosis); 3) Dermatological manifestations included skin symptoms and lesions reported during clinical examination or documented in the medical records, including pruritus, erythema nodosum, pyoderma gangrenosum, and perianal cutaneous lesions (ulcers or fistulas); 4) Hepatic manifestations included abnormalities suggestive of hepatobiliary involvement, such as liver cytolysis, cholestasis, or primary sclerosing cholangitis, when documented by biological and/or imaging investigations.

2.5. Statistical Analysis

Statistical analyses were performed using Epi Info version 7.2.7.0. Qualitative var-

ables were expressed as frequencies and percentages and compared using the Chi-square test or Fisher's exact test when appropriate. Quantitative variables were expressed as means $\pm$ standard deviation and compared using Student's t-test. A bivariate analysis was first performed to identify factors associated with each category of extra-intestinal manifestations. Variables that were statistically significant in the bivariate analysis ($p < 0.05$) were subsequently entered into multivariable logistic regression models to identify independent associations. Because of the limited sample size and the low number of dermatologic and hepatic events, multivariable analyses were considered exploratory, and the results were interpreted with caution. Statistical significance was set at $p < 0.05$.

2.6. Ethical Considerations

Patient confidentiality and anonymity were ensured by assigning a unique identification number to each participant. Written informed consent was obtained from all adult patients before inclusion in the study. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki and received institutional approval from the Libreville University Hospital (CHUL).

3. Results

3.1. Sociodemographic Characteristics

3.1.1. Frequency

During the study period, 268 patients presented inflammatory lesions of the digestive mucosa at ileocolonoscopy. Following clinicopathological assessment integrating clinical evaluation, endoscopic findings, systematic histopathological examination of biopsy specimens, and radiological investigations when indicated, 48 patients fulfilled the diagnostic criteria for inflammatory bowel disease and were included in the study, corresponding to 17.9% of patients with inflammatory endoscopic lesions (see **Figure 1**). Of these, 16 (33.3%) had Crohn's disease and 32 (66.7%) had ulcerative colitis.

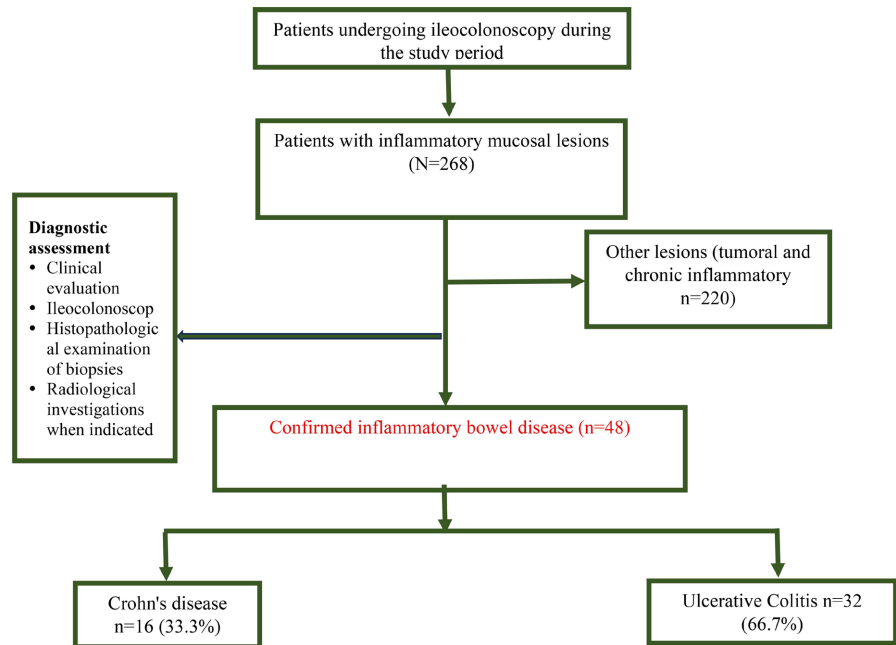
3.1.2. Socio-Demographic Aspects

The interpretation of **Table 1** shows a sex ratio of 2 with an average age of 37.4 ± 11.2 years, mainly concentrated in the [30 - 49 years] age group (45.8%). Socio-professionally, nearly half of the patients were unemployed (47.9%), followed by retirees (22.9%), while civil servants and students each made up 14.6% of the group. The socio-economic profile was mostly disadvantaged, with 85.4% of patients classified as low level, compared to 8.3% at medium level and 6.3% at high level.

3.2. Profile of Extra-Digestive Manifestations

3.2.1. Ophthalmic Manifestations (n = 22; 45.8%)

Twenty-two patients (45.8%) presented ophthalmic manifestations. Among them, 15 underwent ophthalmologic evaluation, whereas seven were assessed only during gastroenterology consultation because ophthalmologic assessment was not

**Figure 1.** Flowchart.**Table 1.** Sociodemographic characteristics of patients followed for IBD.

Variables	n	%	p-value
1) Sex			
Male	32	66.7	0.78
Female	16	33.3	
Sex ratio (M/F)	2.0		
2) Age at diagnosis			
Mean age (years)	37.4 ± 11.2		0.39
Median (years)	35		
Minimum age (years)	18		
Maximum age (years)	82		
3) Age groups			
<30 years	14	29.2	
30 - 49 years	22	45.8	
50 - 69 years	9	18.8	
≥70 years	3	6.2	
4) Occupation			
Unemployed	23	47.9	
Retired	11	22.9	
Civil servants	7	14.6	
Students	7	14.6	
5) Socioeconomic status			
Low	41	85.4	
Middle	4	8.3	
High	3	6.3	

available. The most frequently reported ocular symptoms were red eye (12/22, 54.5%), followed by photophobia (5/22, 22.7%) and decreased visual acuity (5/22, 22.7%). Among the 15 patients examined by an ophthalmologist, scleritis was diagnosed in 10 patients (66.7%), uveitis in 3 (20.0%), and episcleritis in 2 (13.3%).

3.2.2. Rheumatologic Symptoms (n = 20; 41.7%)

Joint issues affected 20 patients (41.7%). Polyarthralgia was the most common (75.0%, n = 15), followed by peripheral arthritis (20.0%, n = 4) and axial spondyloarthritis (5.0%, n = 1). These joint problems occurred alongside flare-ups of IBD.

3.2.3. Skin Symptoms (n = 5; 10.4%)

Among the dermatological manifestations investigated, pruritus was the only abnormality observed, affecting five patients (10.4%). No cases of erythema nodosum, pyoderma gangrenosum, or perianal cutaneous lesions were identified.

3.2.4. Liver Manifestations (n = 1; 2.1%)

One patient (2.1%) presented isolated liver cytolysis. No patient fulfilled the diagnostic criteria for primary sclerosing cholangitis or other documented hepatobiliary manifestations.

3.2.5. Concomitant Extra-Digestive Conditions

Eleven patients had simultaneous ophthalmologic and rheumatologic involvement, mainly polyarthralgia (22.91%). Two patients had combined ophthalmologic and dermatologic issues, mainly pruritus (4.16%).

Overall, **Figure 2** shows that 48 patients (100%) were evaluated for EDMs. Eye involvement was the most common extra-digestive symptom, found in 22 patients (45.8%), followed by rheumatological issues (41.7%), skin problems (10.4%), and liver involvement (2.1%).

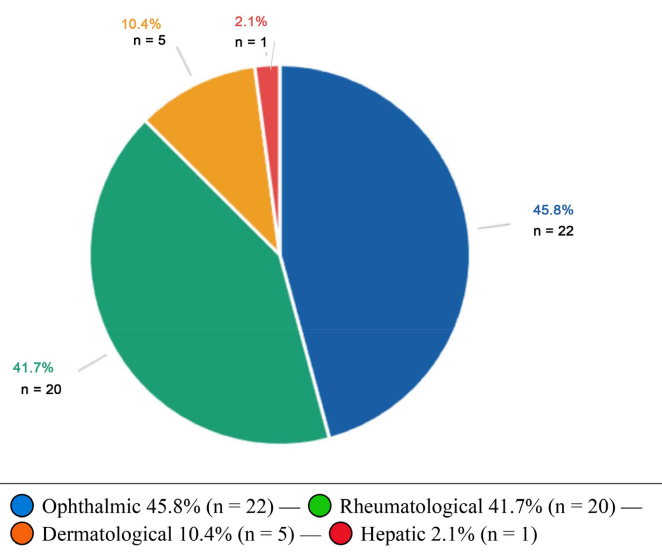


Figure 2. Distribution of extra-intestinal manifestations by category (n = 48).

3.3. IBD Profile

3.3.1. Diagnostic Delay

As shown in **Table 2**, the diagnostic delay in our series ranged from 6 months to 3 years. Multivariate analysis showed that a diagnostic delay of more than 6 months was significantly associated with increased lesion severity (OR = 2.4; 95% CI [1.3 - 4.5]; $p = 0.01$).

3.3.2. Duration of IBD Progression

Thirty patients, or 62.5%, had been living with the disease for 5 years or more at the time of evaluation, compared to 37.5% ($n = 18$) who had a duration of less than 5 years. Multivariate analysis showed that a prolonged disease course (≥ 5 years) was independently associated with the occurrence of eye complications (OR = 2.6; 95% CI [1.1 - 6.4]; $p = 0.04$).

3.3.3. IBD Activity at the Time of Evaluation

Thirty-four patients (70.8%, $n = 34$) were experiencing an active flare at the time of evaluation, while 29.2% ($n = 14$) were in remission. Active flare was the factor most strongly associated with eye complications in our series (OR = 3.2; 95% CI [1.2 - 8.5]; $p = 0.02$), confirmed by multivariate logistic regression ($p = 0.03$). Patients in an active flare were thus 3.2 times more likely to develop eye manifestations than those in remission.

Table 2. Diagnostic delay, disease duration, and activity of IBD.

Variables	n	%	Adjusted OR	(IC 95%)	p-value
DIAGNOSTIC TIMEFRAME					
Minimum delay	6 months				
Maximum delay	3 years				
Delay > 6 months	increased severity of lesions		2.4	[1.3 - 4.5]	0.01
DURATION OF IBD PROGRESSION					
Duration < 5 years	18	37.5			
Duration ≥ 5 years	30	62.5			
Duration ≥ 5 years	eye problems		2.6	[1.1 - 6.4]	0.04
IBD ACTIVITY					
Active flare	34	70.8			
Remission	14	29.2			
Active flare	eye involvement		3.2	[1.2 - 8.5]	0.02

4. Factors Associated with Extra-Digestive Manifestations

4.1. Eye Manifestations

Bivariate analysis identified two factors significantly associated with ophthalmic manifestations: active disease flare (OR = 3.2; 95% CI: 1.2 - 8.5; $p = 0.02$) and

disease duration ≥ 5 years (OR = 2.6; 95% CI: 1.1 - 6.4; $p = 0.04$), as shown in **Table 3**. No significant associations were found for IBD type, sex, or age. After multivariable logistic regression, only active disease flare remained significantly associated with ophthalmic manifestations ($p = 0.03$).

Table 3. Bivariate and multivariate analysis of factors associated with eye conditions.

Factors	OR brut	IC 95%	p-value
IBD activity (flare-up vs remission)	3.2	[1.2 - 8.5]	0.02
Duration of evolution ≥ 5 years	2.6	[1.1 - 6.4]	0.04
MC Type vs RCH	1.8	[0.7 - 4.6]	0.21
Male	1.4	[0.6 - 3.4]	0.41
Age ≥ 40 years	1.2	[0.5 - 2.9]	0.68

After multivariable logistic regression, only active disease flare remained significantly associated with ophthalmic manifestations ($p = 0.03$).

4.2. Rheumatologic Manifestations

Bivariate analysis of factors associated with rheumatologic manifestations is presented in **Table 4**. In multivariate analysis (**Table 5**), Crohn's disease is the only factor independently associated with rheumatologic issues (adjusted OR = 10.22; 95% CI [2.29 - 45.57]; $p = 0.002$). Patients with Crohn's had a 10 times higher risk of developing joint problems than patients with UC, after adjusting for disease activity.

Table 4. Bivariate analysis of factors associated with rheumatologic conditions.

Factors	CD	UC	OR brut	IC 95%	p-value
MC Type vs RCH	12/16 (75.0%)	8/32 (25.0%)	9	[2.25 - 35.99]	0.001
IBD activity (active flare)	17/34 (50.0%)	3/14 (21.4%)	3.67	[0.87 - 15.52]	0.068
Duration of evolution ≥ 5 years	13/30 (43.3%)	7/18 (38.9%)	1.2	[0.37 - 3.96]	0.762
Male	14/32 (43.8%)	6/16 (37.5%)	1.3	[0.38 - 4.43]	0.679
Age ≥ 40 years	5/14 (35.7%)	15/34 (44.1%)	0.7	[0.19 - 2.55]	0.591

Table 5. Multivariate logistic regression of rheumatologic conditions.

Independent factors	Adjusted OR	IC 95%	p-value
IBD Type: Crohn's Disease vs UC	10.22	[2.29 - 45.57]	0.002
IBD activity (active flare)	4.55	[0.84 - 24.52]	0.078

4.3. Dermatological Manifestations

No factor reaches statistical significance, as shown in **Table 6**. However, the exploratory analysis suggests a trend towards an association with age ≥ 40 years (ad-

justed OR = 7.14; $p = 0.075$) and female sex (adjusted OR = 5.88; $p = 0.108$).

Table 6. Multivariate logistic regression of skin conditions.

Factors	CD	UC	OR brut	IC 95%	p-value
Age ≥ 40 years	3/14 (21.4%)	2/34 (5.9%)	4.36	[0.64 - 29.64]	0.109
Female sex	3/16 (18.8%)	2/32 (6.2%)	3.45	[0.52 - 23.10]	0.181
IBD activity (active flare)	3/34 (8.8%)	2/14 (14.3%)	0.58	[0.09 - 3.92]	0.573
MC Type vs RCH	1/16 (6.2%)	4/32 (12.5%)	0.47	[0.05 - 4.56]	0.504
Duration of evolution ≥ 5 years	3/30 (10.0%)	2/18 (11.1%)	0.89	[0.13 - 5.90]	0.903

4.4. Multivariate Analysis Syntheses

In bivariate analysis, active disease flare and disease duration ≥ 5 years were significantly associated with ophthalmic manifestations. However, after multivariate analysis, only active disease flare remained significantly associated with ophthalmic involvement ($p = 0.03$). For rheumatologic manifestations, Crohn's disease remained the only independently associated factor (adjusted OR = 10.22; 95% CI: 2.29 - 45.57; $p = 0.002$). No significant association was observed between sex and ophthalmic manifestations.

5. Discussion

5.1. Epidemiological Aspects of IBD

5.1.1. Hospital Frequency

In our study, inflammatory bowel disease represented 17.9% of patients presenting inflammatory lesions at ileocolonoscopy after confirmation by clinicopathological assessment. This proportion should not be interpreted as the hospital prevalence of IBD among all patients undergoing digestive endoscopy or attending CHUL, but rather as the proportion of confirmed IBD among patients with inflammatory endoscopic lesions. This reflects the diagnostic yield of the standardized work-up applied in our center rather than the overall burden of IBD in the hospital population. This proportion reflects a reality that is now well documented in sub-Saharan Africa, where IBD, long considered rare, is seeing its incidence increase in connection with epidemiological transition and urbanization [8].

Watermeyer *et al.*'s review [8] points out that the standard prevalence rates for Central and West Sub-Saharan Africa range between 9.9 and 11.2 per 100,000 people, which is far from the 442 per 100,000 reported in North America, but there is documented growth [5]. The multicenter IBD case reporting network in Sub-Saharan Africa (175 cases, 12 countries, 2021-2023) [10] confirms this emerging trend and highlights that the lack of published data mainly reflects underdiagnosis due to diagnostic limitations (endoscopy capacity, access to pathology) rather than a true rarity of the disease [12].

5.1.2. Sex Ratio and Male Predominance

Our series shows a clear male predominance with a male/female ratio of 2.0, in

line with recent data from the African literature. The surveillance network in sub-Saharan Africa (Emerging Patterns of IBD in SSA, Journal of Crohn's and Colitis, 2024) reported 55% men versus 45% women (male/female ratio ≈ 1.2). In a multicenter cohort of 1774 patients (1993-2025), Khanna *et al.* observed a male predominance at 61%, with male/female ratios of 1.6 for UC and 1.47 for CD [3]. These figures back up our observation and suggest that male predominance is more pronounced in African series than in the West, where more balanced epidemiological patterns are seen according to age and geographic region. Several hypotheses have been put forward to explain this phenomenon, including differences in exposure to environmental factors (smoking, diet, gut microbiome) and a possible under-diagnosis in African women related to less systematic healthcare use [10].

5.1.3. Age at Diagnosis

The average age at diagnosis in our series was 37.4 ± 11.2 years, with a median of 35 years, in line with data from the African network [10], which reported a median age at diagnosis of 37 years (32 years for CD, 38 years for UC). These figures are comparable to the recent Lebanese series [10], which found an average of 36.4 years for CD and 41 years for UC. This data confirms that IBD in Africa predominantly affects young adults during their peak working years, contrary to the long-standing perception that these conditions mostly affect older populations in Western countries. The age group [30 - 49 years] was the most represented (45.8%), which is consistent with the classic peak incidence described between 20 and 40 years for CD and 30 to 40 years for UC [9] [12].

5.1.4. Type of IBD: Predominance of UC

UC accounted for 66.7% of our cases compared to 33.3% for CD, giving a UC/CD ratio of 2:1. This predominance is consistent with the available African data: in the surveillance network [9], 58% of cases were UC and 36% were CD. This predominance of UC over CD in sub-Saharan Africa is different from the Asian and developing countries' profiles, where CD tends to be proportionally more represented [12]. It can be partly explained by better diagnostic accessibility for UC (sigmoidoscopy) compared to ileal involvement in CD, which requires a full ileocolonoscopy and, ideally, additional imaging.

5.2. Extra-Digestive Manifestations (EDMs) of IBD

5.2.1. Overall Frequency of EDMs

In our series, 79.2% of patients had at least one EDM, a high overall prevalence compared to the 24% (95% CI: 19 - 31) reported in the meta-analysis by Kilic *et al.* [13] on European and North American series, and the 25% - 40% usually reported in large international registries [13]. The prevalence observed in our context can be explained by several factors: a systematic and thorough search for EDMs, including minor clinical signs (itching, non-specific joint pains, eye redness). the high proportion of patients in an active flare-up (70.8%), a time frame

when extra-intestinal manifestations (EIMs) are most frequently expressed; and hospital recruitment naturally selecting for more advanced or active forms. The EMRO regional meta-analysis [14] concluded that 25% of patients had more than one EIM, a figure comparable to our 22.91% of patients with both eye and rheumatologic involvement.

5.2.2. Eye Issues: First MEI in Our Series

The prevalence of eye issues (45.8%) is the most significant finding of our study. This rate is much higher than the 4% to 12% reported in Western literature [4], the 7.2% in the EMRO meta-analysis [14], and the 6.6% in the Tunisian series by Elloumi *et al.* [15]. In our series, eye redness (54.5%) and light sensitivity (22.7%) were the most common signs. The high prevalence observed likely reflects active clinical screening of all eye signs, including mild forms that go undiagnosed in reference retrospective series, as well as the high proportion of patients in an active flare-up. Epidemiologically, eye problems are more common in Crohn's disease than in ulcerative colitis according to most studies [15]. Merino *et al.*'s meta-analysis [7] confirmed an increased odds of uveitis in Crohn's disease compared to ulcerative colitis (OR 1.60; 95% CI [1.25 - 2.05]). In our series, the type of IBD (Crohn's vs UC) wasn't significantly linked to eye issues (OR 1.8; $p = 0.21$), which could be due to the small size of our sample.

5.2.3. Rheumatologic Issues: Second EIM

Rheumatologic issues affected 41.7% of our patients, mostly polyarthralgia (75.0%), in line with global data where joint manifestations are the most common EIM in IBD (6% to 47% depending on the criteria used) [4] [6]. The meta-analysis by Kilic *et al.* [13] reported an overall prevalence of 24% for at least one joint EIM, with higher rates for Crohn's disease (35%) than for ulcerative colitis (27%). These findings are consistent with the broader epidemiological trends of inflammatory bowel disease reported in West African cohorts [16]. In our multivariate analysis, CD was the only factor independently associated with rheumatologic involvement (adjusted OR = 10.22; 95% CI [2.29 - 45.57]; $p = 0.002$), with patients with CD being more than ten times as likely to develop joint EIMs than patients with UC. This result is consistent with the literature: the EMRO meta-analysis [14] confirmed that the prevalence of arthralgias and arthritis was higher in CD than in UC. Peripheral arthritis, especially type 1 (oligoarticular, related to intestinal activity) and type 2 (polyarticular, independent), is classically more documented in CD due to the transmural and systemic nature of the inflammation [4].

5.2.4. Skin and Liver Manifestations: Context Underrepresentation

Among the dermatological manifestations investigated, only pruritus was observed in our series, whereas no cases of erythema nodosum or pyoderma gangrenosum were identified. Likewise, isolated liver cytolysis was the only hepatobiliary abnormality observed, and no patient was diagnosed with primary sclerosing cholangitis. This is below global data: skin manifestations affect about 10% of patients with IBD [4] [13], with erythema nodosum (EN) and pyoderma gangreno-

sum (PG) as the classic forms, which were absent in our series. Liver and biliary issues, especially primary sclerosing cholangitis (PSC), affect 2% to 7% of patients in Western series [6] [14]. The absence of EN, PG, and CSP cases in our series can be explained by diagnostic constraints specific to our context: the lack of routine skin biopsies for suggestive lesions and the unavailability of biliary MRI as a standard practice, which is the gold standard for early diagnosis of CSP. These limitations reflect well-documented challenges in the management of IBD in low-resource countries [12], where access to advanced endoscopic procedures (cholangioscopy, ERCP), MRI, and skin pathology remains very limited.

5.3. Extra-Intestinal Manifestations (EIM) According to the Type of IBD

Looking at our data by type of IBD, the main trends reported in the international literature are confirmed. Crohn's disease (CD) was significantly associated with rheumatologic involvement (75.0% of CD patients vs 25.0% of UC patients; crude OR = 9; $p = 0.001$), a result that was confirmed in multivariate analysis (adjusted OR = 10.22; $p = 0.002$). This CD > UC gradient for joint EIM is well established in the literature [4] [6] [14]. For eye problems, there was a trend favoring CD, but it wasn't significant in our series (crude OR = 1.8; $p = 0.21$), probably due to lack of statistical power. Large cohorts, however, do confirm a higher frequency of ocular EIMs in CD [4] [15]. Skin and liver issues were too rare in our series to allow a comparative analysis based on the type of IBD.

5.4. Factors Associated with EIMs

The analysis of factors associated with EIMs was conducted separately for each location using multivariate logistic regression. For eye involvement, an active flare was the only independent factor (OR 3.2; $p = 0.03$), consistent with the pathophysiology of episcleritis, which progresses alongside intestinal flares. Disease duration ≥ 5 years was significant in bivariate analysis ($p = 0.04$), but lost significance in multivariate analysis due to collinearity with disease activity. For joint involvement, Crohn's disease type was the only independent factor (adjusted OR 10.22; $p = 0.002$), reflecting the transmural and systemic nature of inflammation in Crohn's disease.

For skin issues, no factor reached statistical significance ($n = 5$), although there was a trend for age ≥ 40 years ($p = 0.075$) and female gender ($p = 0.108$). For liver issues, analysis was impossible due to the single documented case. Overall, two independent determinants stand out: active flare-ups for eye-related extraintestinal manifestations, and Crohn's disease type for joint-related extraintestinal manifestations. These results support systematic screening during active flare-ups and enhanced rheumatological follow-up for any patient with Crohn's disease, in line with ECCO consensus recommendations [4].

6. Conclusion

Our study reports for the first time in Gabon the epidemiological profile of extra-

intestinal manifestations of chronic inflammatory bowel diseases, in a hospital cohort of 48 patients followed over a six-year period. Extra-intestinal manifestations proved to be common in our setting, affecting 79.2% of the patients evaluated, dominated by eye involvement (45.8%), followed by rheumatologic (41.7%), dermatologic (10.4%), and liver (2.1%) issues. This profile differs from the available African and global data due to the unexpected predominance of eye manifestations, making the eye the second target organ after the digestive tract in our series. A male predominance with a sex ratio of 2 was observed. The multivariate analysis made it possible to identify two independent determinants: the active flare of IBD for eye involvement and Crohn's disease type for rheumatologic involvement. These results have direct and practical clinical implications: any patient with IBD in an active flare should get a systematic eye check-up, and any patient with Crohn's disease should be regularly monitored by a rheumatologist, regardless of digestive activity. The underrepresentation of skin and liver issues in our series highlights the diagnostic limitations inherent in resource-limited settings and argues for strengthening specialized technical facilities in university hospitals in sub-Saharan Africa. Larger multicenter prospective studies, with standardized tests, are needed to confirm these observations, better characterize minor or atypical IEIs, and develop screening algorithms suited to the specific constraints of sub-Saharan Africa.

Author Contributions

AA.E. (Principal Investigator) designed the study, wrote the protocol, and coordinated data collection. PD.N., GL.N. and M.S. participated in patient enrollment and data gathering. PE.I.B, IF.M.M.T., M.M., and A.N. carried out the statistical analyses and literature review. JB.M.K. (Sponsor) supervised the study and reviewed the final manuscript. All authors read and approved the final version of the manuscript.

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Conflicts of Interest

The authors declare that they have no conflicts of interest related to this article.

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