Inflammatory Bowel Disease in sub-Saharan Africa setting: Experience from a large tertiary center in Ethiopia

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Introduction

- Traditionally, IBD has been regarded as a disease of high-income nations, but a shift in the epidemiological pattern has been reported and is attributed to rapid modernization and westernization of the population(1).
- There is a projected increment in the incidence and prevalence of IBD in Africa; however, the primary constraint to date has been the lack of available data(2).
- The sub-Saharan Africa region is home to 13.5 % of the world population, and according to the United Nation, the sub region will account for half of the world's population growth between the years 2019 & 2050.
- Furthermore, the region's overwhelming population segment is young, a demographic group particularly prone to IBD development, necessitating a close observation in light of the global epidemiologic trend.
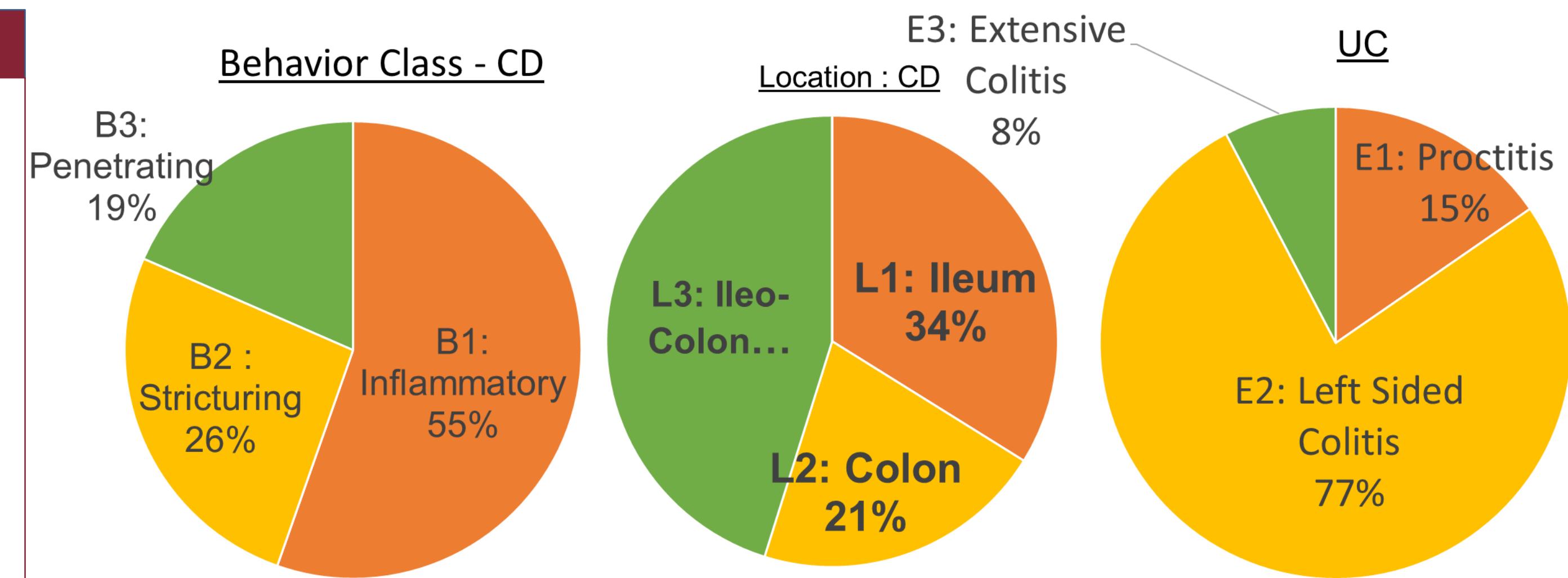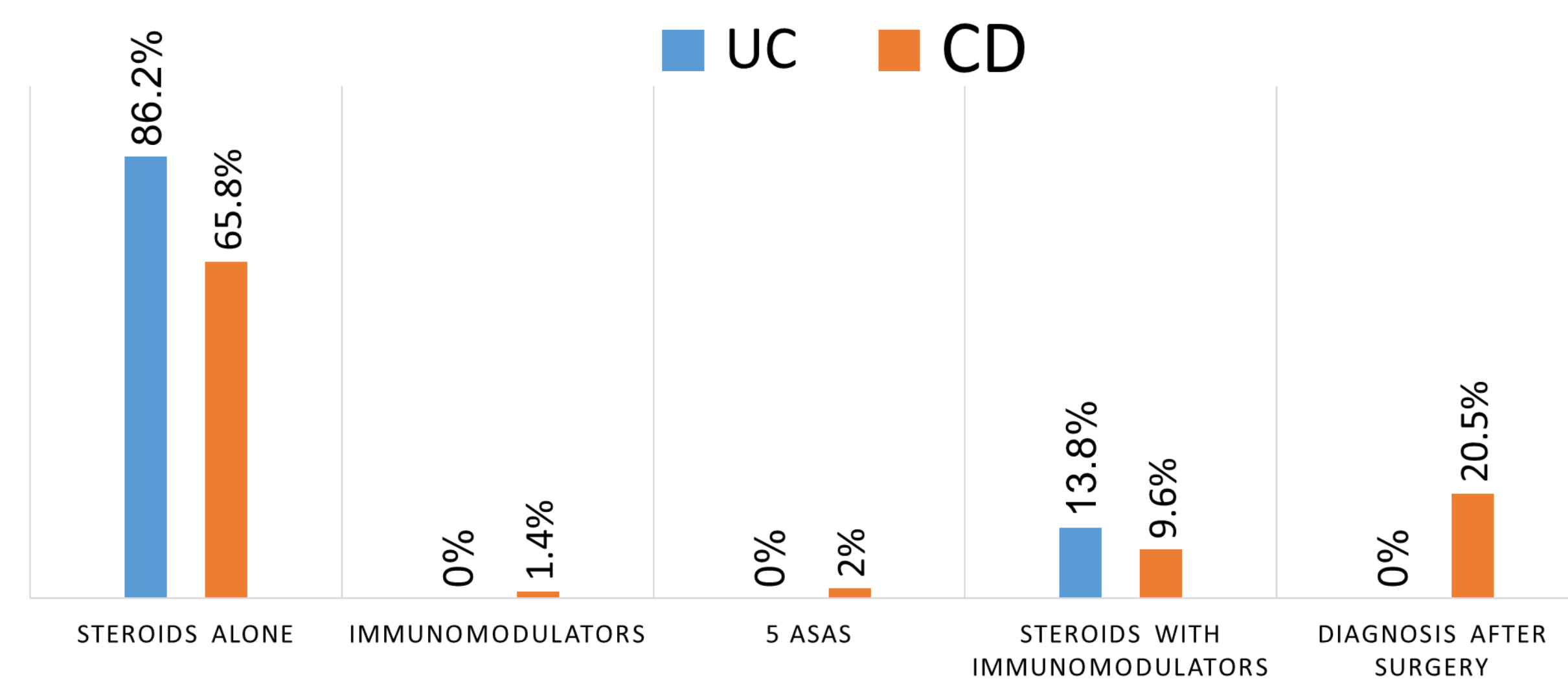
Methods and Materials

- A cross-sectional study was conducted from January to December 2020 at Tikur Anbessa specialized hospital, Addis Ababa, Ethiopia. The institution is the largest hospital in the country, providing care for patients referred for tertiary level care
- Inclusion criteria were a diagnosis of IBD by two gastroenterologists using a combination of clinical, radiological, endoscopic, and histopathological evidence.
- The Exclusion criteria were individuals whose information is significantly missing, patients not accessible for interviews, patients who did not undergo an ileo-colonoscopy with biopsy, patients with doubtful diagnosis after evaluation by gastroenterologists, and patients who refused to provide consent.

Figure 2. Pattern of IBD according to Montreal classification

Initial Therapy Used After Diagnosis

Results

- A total of 102 patients with established IBD fulfilled inclusion criteria and were included in this study. Of those, 73 patients were diagnosed with CD (71.5% of the total), and 29 patients with UC (28.5% of the total). Female patients accounted for the majority (56.9%)
- The mean age at diagnosis of patients with CD was lower than that of patients with UC, and there was a statistical significance between these 2 groups (CD: 26.4 years vs. UC: 33 years, p = 0.04)
- The median duration of illness in patients with CD (3.5 [1-12] years) was comparable with UC (4 [0.5-17] years) (p=0.3). Chronic non-bloody diarrhea (p= 0.001), perianal symptoms (p= 0.03) and UGI symptoms (p= 0.03) were significantly more common in patients with CD
- Patients with CD showed a significantly higher bowel resection rate than those with UC (CD: 21.9% vs. UC: 10.3%, p= 0.003).

Discussion

- The results indicate that Crohn's disease is the dominant form of IBD, with a ratio of 2.5:1. This is contrary to most published studies in Africa and other developing countries where ulcerative colitis is reported to be more common than CD (3).
- Two thirds of the patients came from the capital city, Addis Ababa. IBD is expected to be more prevalent in large urban centers, in line with changing lifestyle patterns.
- Delay or failure of diagnosis may also result from a lack of awareness and misunderstanding of the presence of IBD by many physicians. There is also a lack of adequate diagnostic facilities in the subregion.
- Most patients were treated with steroids and immunomodulators, and none of the patients were treated with biologics. Major factor in treatment limitation with biologics is cost and availability. Most patients pay out of pocket for treatment.
- The main strength of our study is that it is the largest study reported to date from the sub-Saharan Africa region regarding IBD.
- Limitations of the study is that it is cross-sectional in design. Important disease indicators like death during follow-up, CDAI, and Mayo scores were not reported, mainly related to the nature of the study design

Conclusions

The study reported the highest number of patients with IBD in sub-Saharan Africa setting to date.

Contrary to other African reports, Crohn's disease was the dominant IBD phenotype in the Ethiopian context.

With change in lifestyle patterns coupled with improvement in diagnostic services capacity, there might be an increment in the incidence of IBD in the African setup.

		Type of IBD			
		UC N=29	CD N=73	Total N=102	P value
Clinical response to initial therapy, n (%)		27 (93.1)	70 (95.9)	97 (95.1)	0.4
Steroid dependency, n (%)		4 (13.8)	4 (5.5)	8 (7.8)	0.3
Clinical disease activity during last visit/study period, n (%)	None	6 (20.7)	9 (12.0)	15 (14.7)	0.3
	In clinical remission	21 (72.4)	60 (82.2)	81 (79.4)	
	Not in clinical remission	8 (27.6)	13 (17.8)	21 (20.6)	

Table 1. Clinical response patterns during the study.

		Type of IBD			
Variable		UC N=29	CD N=73	Total N=102	P value
Surgery for IBD at any point (Need for surgery), n (%)		4(13.7)	30 (41)	34(33.3)	0.003
Surgical indication, n (%)	Stricturing/obstruction	1(3.4)	14(46.7)	15(44.1)	
	Fistulizing disease	NA	7(23.3)	NA	
	Abscess	0	2(6.7)	2(5.9)	
	Intestinal perforation	0	2(6.7)	2(5.9)	
	Patient reported, prior to initiation of follow up	3(75)	5(16.7)	8(23.5)	
Type of surgery, n (%)	Colectomy (RAA)	3(75)	16 (53.3)	19(55.9)	0.003
	Diversion	NA	6(20)	6(17.6)	
	Abscess drainage	NA	2(6.7)	2(5.9)	
	Fistolotomy/-ectomy	NA	1(3.3)	1(2.9)	
	No data	1(25)	5(16.7)	6(17.6)	
	No	NA	14(46.7)	NA	

Table 2. Surgical Intervention patterns.

References

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