Epidemiological and Clinical Characteristics of Inflammatory Bowel Disease in Egyptian Patients at the Nile Delta: A Single-Center Study

Original Article

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ABSTRACT

Background: Inflammatory Bowel Disease (IBD), encompassing ulcerative colitis (UC) and Crohn's disease (CD), is a chronic condition with increasing prevalence globally.

Aim of the Work: This study aimed to evaluate the epidemiologic, clinical, and treatment characteristics of IBD patients at Tanta University Hospital.

Methods: A cross-sectional study was conducted on 215 patients, including 162 with UC and 53 with CD. Demographic data, clinical presentations, comorbidities, complications, and management strategies were assessed.

Results: UC was more prevalent than CD, with a ratio of 3:1. The mean age of patients was 35.27 years for UC and 37.94 years for CD. Abdominal pain and rectal bleeding were the most common presentations in UC, while CD patients had higher rates of abdominal pain and vomiting. Complications were more frequent in CD (30.2%) than UC (16.7%). Medical treatment was predominant in UC (96.3%), whereas CD required combined medical and surgical approaches more often (13.2%).

Conclusions: The study highlights significant differences in the clinical features and management of UC and CD in the Nile Delta region. UC patients primarily benefited from medical management, while CD patients faced a more severe disease course requiring multidisciplinary approaches.

Key Words: Crohn's disease, epidemiology, inflammatory bowel disease, tanta, ulcerative colitis.

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INTRODUCTION

Inflammatory Bowel Disease (IBD) is a chronic inflammatory condition of the gastrointestinal tract, encompassing two primary forms: ulcerative colitis (UC) and Crohn's disease (CD). IBD is influenced by genetic, environmental, and immune factors, with increasing prevalence worldwide. Historically, IBD was most common in developed regions like North America and Western Europe; however, recent years have shown a rising incidence in Asia and North Africa, including Egypt[1, 2]. This shift reflects a complex interplay of environmental and lifestyle changes associated with urbanization.

IBD typically manifests during the second or third decades of life, with a potential second peak later in life. While there are minor differences in incidence by sex and ethnicity, studies highlight higher prevalence among certain populations, such as Jewish and white communities[3, 4]. The pathogenesis of IBD involves intricate interactions between genetic predisposition, microbial dysbiosis, and environmental factors. Over 200 genetic loci have been implicated, including NOD2 and TNFSF15, which regulate immune responses and autophagy pathways[5, 6]. Environmental contributors such as smoking, antibiotic use, and stress play a significant role, with smoking exhibiting protective effects in UC but worsening outcomes in CD[7].

Diagnostic evaluation of IBD integrates clinical features with advanced tools, including endoscopy, imaging, and biomarkers. Endoscopic assessment remains central for diagnosing and monitoring disease activity, supplemented by histopathological features such as crypt abscesses and reduced goblet cells[8]. Biomarkers like fecal calprotectin (FC) and C-reactive protein (CRP) provide noninvasive measures of inflammation[9]. Cross-sectional imaging, including magnetic resonance enterography (MRE) and computed tomography enterography (CTE), helps assess disease extent and complications[5]. Recent advancements

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in molecular diagnostics, such as next-generation sequencing, have facilitated a deeper understanding of microbial contributions to disease pathogenesis[6].

Management of IBD has evolved with the introduction of biologic therapies targeting specific inflammatory pathways. For UC, biologics like infliximab and vedolizumab target tumor necrosis factor-α (TNF-α) and integrins, respectively, offering options for refractory cases[9, 10]. In CD, agents such as ustekinumab and risankizumab, which inhibit interleukin (IL)-12/23 pathways, represent significant advancements[11]. Small molecule therapies like Janus kinase (JAK) inhibitors, including tofacitinib, are emerging as alternatives for patients who do not respond to traditional therapies[12].

Despite advancements in diagnosis and treatment, disparities in access to care and the availability of advanced therapies persist in developing regions. This study aims to evaluate the epidemiological, clinical, and therapeutic characteristics of IBD patients treated at Tanta University Hospital, a major referral center in the Nile Delta. By highlighting regional patterns and challenges, the findings aim to inform strategies for optimizing care in similar settings.

PATIENTS AND METHODS

Study Design and Setting

This cross-sectional observational study was conducted at Tanta University Hospital, a major referral center in the Nile Delta region of Egypt. The study period spanned from January 2018 to December 2023. Approval was obtained from the institutional ethics committee, and patient confidentiality was strictly maintained.

ETHICAL CONSIDERATIONS

This study adhered to the Declaration of Helsinki guidelines. Ethical approval was obtained from Tanta University Institutional Review Board (IRB approval number: 36264MS116/3/23), and all patient identifiers were anonymized during data handling and analysis.

Study Population

The study included patients diagnosed with inflammatory bowel disease (IBD), either ulcerative colitis (UC) or Crohn's disease (CD), based on clinical, endoscopic, radiological, and histopathological criteria. A total of 215 patients were enrolled, comprising 162 UC patients and 53 CD patients. Patients with indeterminate colitis or incomplete medical records were excluded.

Data Collection

Data were retrieved from medical records using a standardized data extraction form. Demographic characteristics (age, sex, residence, body weight), clinical presentations (abdominal pain, rectal bleeding, diarrhea, weight loss), comorbidities (autoimmune, hepatic, cardiovascular conditions), complications, and treatment details were recorded. Diagnostic data, including laboratory parameters (hemoglobin, fecal calprotectin, C-reactive protein), imaging, and endoscopic findings, were also collected.

Laboratory data, including hemoglobin levels, fecal calprotectin, C-reactive protein, and other parameters, were collected from the most recent investigations performed during the follow-up period to reflect the current disease activity of each patient. These data were retrieved from medical records at the time of the most recent clinic or hospital visit within the study period.

Outcomes

Primary Outcomes

The primary outcomes of this study included the distribution and clinical characteristics of UC and CD cases. Laboratory abnormalities and disease complications were also considered key primary outcomes to better understand the presentation and impact of IBD in the study cohort.

Secondary Outcomes

Secondary outcomes focused on patterns of medical and surgical treatment for UC and CD, including their associated disease outcomes, such as hospitalization rates and complications.

Tools and Scoring Systems Disease severity and extent for UC were assessed using the Mayo Score and the Ulcerative Colitis Endoscopic Index of Severity (UCEIS). CD activity and behavior were evaluated with the Crohn's Disease Activity Index (CDAI) and the Montreal Classification. Biomarkers like fecal calprotectin (FC) and C-reactive protein (CRP) provided noninvasive measures of inflammatory activity. Complications, such as acute severe colitis, strictures, and perianal disease, were categorized based on clinical and endoscopic findings.

RESULTS

Socio-demographic data and clinical characteristics were summarized in (Table 1). The study included 162 patients with UC and 53 with CD. The mean age of UC patients was 35.27 years, while CD patients were slightly older at 37.94 years. Males constituted 54.9% of the UC group and 56.6% of the CD group. The average body weight was comparable in both groups, with UC patients at 72.76 kg and CD patients at 72.23 kg. Rural residence was reported in 58.0% of UC patients compared to 47.2% in the

CD group. Smoking prevalence was similar between the two groups, with 23.5% in UC and 22.6% in CD.

Previous gastrointestinal surgeries were recorded in 8.0% of UC patients and 7.5% of CD patients. Prior hospital admissions were more frequent in CD patients (34.0%) than in UC patients (27.2%). Abdominal pain was reported by 63.0% of UC patients and 92.5% of CD patients. Rectal bleeding was significantly more prevalent in UC patients (69.8%) compared to 26.4% in CD. Tenesmus was also more frequent in UC patients (57.4%) versus 26.4% in CD. Weight loss affected both groups similarly (26.5% UC vs. 26.4% CD), and nocturnal diarrhea was reported by 67.3% of UC patients and 62.3% of CD patients.

The distribution of stool types varied, with Bristol type 7 being more common in UC (47.5%) than CD (20.8%). UC patients reported higher bowel motion frequencies, with 12.3% having eight motions per day. The mean age of disease onset was 32.45 years for UC and 34.96 years for CD, with disease duration medians of two years in both groups.

Table 1: Socio-demographic data and clinical characteristics of patients with IBD in the studied patients.

Parameter		UC (*n*=162)	CD (*n*=53)	Test	*P*
Age (years)		35.27±13.8	37.94±15.78	t=-1.175	0.241
Sex	Male	89(54.9%)	30(56.6%)	X^2=0.045	0.832
	Female	73(45.1%)	23(43.4%)		
Body weight (Kg)		72.76±13.41	72.23±11.79	t=0.236	0.814
Residence	Rural	94(58.0%)	25(47.2%)	X^2=1.90	0.168
	Urban	68(42.0%)	28(52.8%)		
Special habits	Smoking	38(23.5%)	12(22.6%)	X^2=0.015	0.903
	Alcohol	1(0.6%)	0(0.0%)	X^2=0.329	0.566
	Drug use	0(0.0%)	0(0.0%)	--	--
Previous GIT surgery		13(8.0%)	4(7.5%)	X^2=0.0125	0.911
Previous hospital admission		44(27.2%)	18(34.0%)	X^2=0.0125	0.343
Clinical characteristics	Abdominal pain	102(63.0%)	49(92.5%)	X^2=16.612	<0.001*
	Abdominal bloating	75(46.3%)	19(35.8%)	X^2=1.771	0.813
	Tenesmus	93(57.4%)	14(26.4%)	X^2=15.344	<0.001*
	Anorexia	33(20.4%)	16(30.2%)	X^2=2.188	0.139
	Vomiting	4(2.5%)	5(9.4%)	X^2=4.83	^{FE}P=0.028*
	Association with food	10(6.2%)	1(1.9%)	X^2=1.51	^{FE}P=0.219
	Nocturnal diarrhea	109(67.3%)	33(62.3%)	X^2=0.449	0.503
	Fever	10(6.2%)	8(15.1%)	X^2=4.143	0.042*
	Weight loss	43(26.5%)	14(26.4%)	X^2=0.026	0.873
	Rectal bleeding	113(69.8%)	14(26.4%)	X^2=31.023	<0.001
	Dehydration	30(18.5%)	9(17.0%)	X^2=0.064	0.801
Type of stool	Bristol 5	10(6.2%)	12(22.6%)		
	Bristol 6	75(46.3%)	30(56.6%)	X^2=18.4	<0.001*
	Bristol 7	77(47.5%)	11(20.8%)		
Bowel motions per day	3	1(0.6%)	0(0.0%)		
	4	32(19.8%)	22(41.5%)		
	5	44(27.2%)	8(15.1%)		
	6	39(24.1%)	13(24.5%)	X^2=17.3	0.008*
	7	18(11.1%)	6(11.3%)		
	8	20(12.3%)	0(0.0%)		
	≥9	8(4.9%)	4(7.5%)		
Age of onset (years)		32.45±13.41	34.96±15.79	t=-1.128	0.261
Disease duration (years)		2 (0.67-3)	2 (1 - 3)	U=3841	0.302

Data are presented as mean ± SD or frequency (%) or median (IQR). * Significant *P value* <0.05. t: t-test, X2: chi square, U: Mann-Whitney U test, FE: Fisher's exact, UC: ulcerative colitis, CD: Crohn's disease, GIT: gastrointestinal tract, HTN: hypertension, DM: diabetes mellitus.

Comorbidities of IBD patients were shown in (Table 2). Autoimmune diseases were more prevalent in UC patients (8.6%) compared to CD patients (3.4%). Hepatic diseases affected 9.3% of UC patients and 9.4% of CD patients. Anxiety and depression were observed in 11.1% of UC patients and 3.8% of CD patients. Hypertension was present in 11.1% of UC patients and 18.9% of CD patients. Cardiovascular diseases, specifically ischemic heart disease (IHD), were significantly more common in CD patients (11.3%) than UC patients (1.2%) (p = 0.003). The majority of IHD cases were observed in older patients rather than younger individuals. Diabetes mellitus occurred in 11.1% of UC patients and 5.7% of CD patients. Malignancies outside the gastrointestinal tract were rare, reported in 0.6% of UC patients and 1.9% of CD patients.

Table 2: Comorbidities of patients with IBD in the studied patients.

Comorbidity	UC (n=162)	CD (n=53)	X^2	P
Autoimmune diseases	14(8.6%)	2(3.4%)	1.374	0.241
Pancreatitis	2(1.2%)	0(0.0%)	0.660	0.416
Hepatic diseases	15(9.3%)	5(9.4%)	0.001	0.970
Anxiety and depression	18(11.1%)	2(3.8%)	2.548	0.110
HTN	18(11.1%)	10(18.9%)	2.121	0.145
Cardiovascular diseases	2(1.2%)	6(11.3%)	11.3	**^{FE}P=0.003***
kidney diseases	1(0.6%)	0(0.0%)	0.329	0.566
DM	18(11.1%)	3(5.7%)	1.346	0.246
Neurological diseases	3(1.9%)	0(0.0%)	0.995	0.318
Malignancy outside GIT	1(0.6%)	1(1.9%)	0.698	0.403

Data are presented as frequency (%), * Significant *P value* <0.05, X^2: chi square, HTN: hypertension, DM: diabetes mellitus.

(Table 3) summarized the laboratory investigations. UC patients had a significantly lower mean hemoglobin level (11.00 g/dL) compared to CD patients (11.67 g/dL). Mean corpuscular volume (MCV) was also lower in UC (69.19 fL) compared to CD (76.17 fL). levels were higher in UC patients, with a median of 409 ng/mL, than in CD patients (208 ng/mL). Positive C-reactive protein (CRP) was observed in 76.5% of UC patients compared to 90.6% of CD patients. Tissue transglutaminase IgA (tTG-IgA) was negative in 95.7% of UC patients and 90.6% of CD patients, with equivocal results more frequent in CD patients (9.4%) than UC (2.5%).

Table 3: Laboratory investigations of patients with IBD in the studied patients.

Laboratory investigations		UC(n=162)	CD(n=53)	Test	P
Hb (g/dL)		11.00±1.40	11.67±1.26	t=-2.293	0.023*
MCV (fL) (80-100)		69.19±10.29	76.17±9.26	t=-2.641	0.010*
Platelets (×103/mm3)		291.10±98.29	297.81±100.68	t=-0.397	0.691
TLC (×103/mm3)		8.06±3.34	8.90±3.38	t=-0.156	0.876
ALT (U/L) (Up to 40)		31(21-43.5)	25(17.5-38.5)	U=160	0.345
Albumin (g/dL)		3.71±0.57	3.68±0.52	t=0.242	0.810
Bilirubin (mg/dL)		1.14±0.92	0.78±0.34	t=1.587	0.119
Creatinine (mg/dL)		1.01±0.30	0.99±0.27	t=0.280	0.780
TSH (µIU/mL) (0.4-4.5)		2.32±0.99	2.42±0.71	t=-0.561	0.576
FC (ng/mL) (<50)		409(212-608)	208(109-488)	U=2912	0.002*
ESR 1st hr (mm/hr)		53.34±23.81	52.30±25.61	t=0.227	0.820
ESR 2nd hr (mm/hr)		76.04±23.13	74.71±24.00	t=0.279	0.781
CRP (mg/L)	Negative (<10)	54(23.5%)	5(9.4%)	X^2=4.91	0.027*
	Positive (≥ 10)	124(76.5%)	48(90.6%)		
tTG-IgA (U/ml)	Negative (<7)	155(95.7%)	48(90.6%)	X^2=5.72	0.057
	Equivocal (7-10)	4(2.5%)	5(9.4%)		
	Positive (>10)	3(1.8%)	0(0.0%)		

Data are presented as mean ± SD or frequency (%) or median (IQR). * Significant *P value* <0.05. t: t-test, X^2: chi square, U: Mann-Whitney U test, FE: Fisher's exact , UC: ulcerative colitis , CD: Crohn's disease, GIT: gastrointestinal tract, HTN: hypertension, DM: diabetes mellitus, Hb: hemoglobin, MCV:mean corpuscular volume, TLC: total leukocyte count, ALT: alanine transaminase, TSH: thyroid stimulating hormone, FC: fecal calprotectin, ESR: erythrocyte sedimentation rate, CRP: C-reactive protein, tTG-IgA: tissue transglutaminase IgA.

Complications and treatment characteristics were presented in (Table 4). Complications were more common in CD patients (30.2%) compared to UC patients (16.7%). Acute severe ulcerative colitis (ASUC) was observed in 70.4% of UC cases with complications but was absent in CD. Strictures were more common in CD patients (43.7%) compared to UC (7.4%), and perianal disease was exclusively seen in CD patients (31.3%). Toxic megacolon was reported only in UC (14.8%), while penetration occurred only in CD (18.7%).

Medical management was predominant in both groups, but more common in UC (96.3%) than in CD (83.0%). Combined medical and surgical treatments were required more frequently in CD patients (13.2%) than UC (3.1%). Systemic biologics were used in 45.3% of UC patients and 33.3% of CD patients. Local treatments combined with systemic steroids and 5-ASA were more commonly used in CD patients (43.1%) compared to UC (15.5%). (Table 4)

Table 4: Complications and treatment characteristics of IBD in the studied patients.

	UC (*n*=162)	CD (*n*=53)	Test	*P*
Presence of complications	27(16.7%)	16(30.2%)	X^2=4.564	0.033*
		Type of complications		
ASUC	19(70.4%)	0(0.0%)		
Perforation	2(7.4%)	1(6.3%)		
Penetration	0(0.0%)	3(18.7%)	X^2=29.660	<0.001*
Stricture	2(7.4%)	7(43.7%)		
TM	4(14.8%)	0(0.0%)		
Perianal disease	0(0.0%)	5(31.3%)		
		Treatment characteristics		
Medical	156(96.3%)	44(83.0%)		
Surgical Both	1(0.6%)	2(3.8%)	X^2=10.94	0.004*
Both	5(3.1%)	7(13.2%)		
		Medication type		
Local treatment	26(16.1%)	0(0.0%)		
Systemic - 5-ASA	73(45.3%)	17(33.3%)	X^2=22.874	<0.001*
Systemic - Steroids	25(15.5%)	22(43.1%)		
Systemic - Biologics	37(23.0%)	12(23.5%)		

Data are presented as frequency (%). * Significant *P value* <0.05. X^2: chi square, UC: ulcerative colitis, CD: Crohn's disease, ASUC: acute severe ulcerative colitis, TM: toxic megacolon, 5-ASA: 5-aminosalicylic acid.

Epidemiological and clinical characteristics of patients with indeterminate colitis excluded from the study were shown in (Table 5).

Cardiovascular diseases were significantly less common in the UC group compared to the CD group (1.2% vs. 11.3%, $p = 0.003$), while other comorbidities showed no significant differences between the groups ($p > 0.05$). Autoimmune diseases were present in 14 patients in the UC group (6 with rheumatoid arthritis, 5 with vasculitis, 1 with psoriasis, and 2 with unspecified autoimmune diseases) and in 2 patients in the CD group (both with rheumatoid arthritis). Hepatic diseases were observed in 15 UC patients (4 with HCV, 2 with HBV, 6 with NAFLD, and 3 with primary sclerosing cholangitis) and in 5 CD patients (1 with HCV, 1 with HBV, and 3 with NAFLD). Neurological diseases were noted in 3 UC patients (2 with a history of stroke and 1 with multiple sclerosis), while none were reported in the CD group.

Table 5: Epidemiological and clinical characteristics of patients with indeterminate colitis excluded from the study.

Parameter		Indeterminate colitis (*n*=12)
Age (years)		39.11±16.9
Sex	Male	8(66.67%)
	Female	4(33.33%)
Body weight (Kg)		68.87±18.6
Residence	Rural	5(41.67%)
	Urban	7(58.33%)
Special habits	Smoking	5(41.67%)
	Alcohol	0(0.0%)
	Drug use	0(0.0%)
Previous GIT surgery		1(8.33%)
Previous hospital admission		1(8.33%)
Clinical characteristics	Abdominal pain	10(83.33%)
	Abdominal bloating	3(25.0%)
	Tenesmus	4(33.33%)
	Anorexia	1(8.33%)
	Vomiting	0(0.0%)
	Association with food	0(0.0%)
	Nocturnal diarrhea	4(33.33%)
	Fever	0(0.0%)
	Weight loss	2(16.67%)
	Rectal bleeding	4(33.33%)
	Dehydration	2(16.67%)
Type of stool	Bristol 5	0(0.0%)
	Bristol 6	10(83.33%)
	Bristol 7	2(16.67%)
Bowel motions per day	3	0(0.0%)
	4	6(50.0%)
	5	3(25.0%)
	6	0(0.0%)
	7	3(25.0%)
	8	0(0.0%)
	≥9	0(0.0%)
	Medical	11(91.67)
Treatment	Surgical	0(0.0)
	Both	1(8.33)

Data are presented as frequency (%).

DISCUSSION

The UC to CD ratio in this study was 3:1, lower than ratios reported by ***Esmat et al.***[13] and ***Elbadry et al.***[14] (6:1 and 4.3:1 respectively) but consistent with global trends of increased CD diagnosis[15].

The current study observed a near-equal male-to-female ratio in IBD patients, with a slight male predominance in both UC (54.9%) and CD (56.6%). This aligns with findings from ***Leong et al.***[16] and ***Jiang et al.***[17], who reported male predominance in CD. ***Shah et al.***[18] highlighted a higher incidence of UC in men over 45 years. However, earlier Egyptian studies by ***Esmat et al.***[13] and ***Elbadry et al.***[14] found a male predominance in CD but a female predominance in UC. Variations in gender patterns may stem from differences in population characteristics or diagnostic practices. Notably, ***Alatab et al.***[1] and Hammer and Langholz[2] reported minimal gender differences, while ***Shah et al.***[18, 19] noted regional differences, with men more likely to develop UC and CD in Asian-Pacific countries.

The observed gender differences in IBD prevalence across studies likely result from a combination of biological, environmental, and sociocultural factors. Hormonal influences, such as the protective role of estrogen, may partially account for variations in UC and CD prevalence between males and females. Additionally, sociocultural factors, including differences in health-seeking behavior and disease reporting, may influence diagnosis rates. Variations in genetic susceptibility and immune response pathways between genders could also contribute to these discrepancies.

In this study, 55% of IBD patients resided in rural areas, consistent with ***Elbadry et al.***[14] but differing from studies in Canada[20] and the USA[21], where urban residency was more common. This disparity could be attributed to the study's setting in Egypt's predominantly rural Nile Delta region and rapid urbanization, which may influence IBD characteristics[22].

The observed prevalence of IBD in rural areas may be influenced by the ongoing urbanization of these regions, leading to dietary shifts towards processed food and increased exposure to environmental risk factors. Additionally, improved healthcare accessibility in rural settings may have contributed to more frequent diagnoses rather than underreporting. This contrasts with prior assumptions that lower processed food consumption would reduce IBD prevalence.

The study found that 23.5% of UC patients and 22.6% of CD patients were smokers, supporting ***Khasawneh et al.***[23], who reported a 40%-60% increased risk of IBD among smokers, along with higher relapse rates and complications.

Cardiovascular diseases were significantly lower in UC patients compared to CD patients (1.2% vs. 11.3%, $p = 0.003$), consistent with ***Elbadry et al.***[14]. Shared risk factors like chronic inflammation and smoking contribute to increased cardiovascular risks in IBD[24]. The study also reported that 47% of IBD patients with autoimmune diseases experienced comorbidities such as rheumatoid arthritis and psoriasis, consistent with several studies[25, 26].

CD patients exhibited higher rates of abdominal pain, vomiting, and fever than UC patients ($p < 0.05$), consistent with ***Nóbrega et al.***[27] and also with ***Kurt et al.***[28], who reported that abdominal pain was present in 38% of CD patients compared to 25.6% of UC patients. Conversely, UC patients experienced higher rates of rectal bleeding and tenesmus ($p < 0.05$), aligning with ***Moussa et al.***[29] and Petryszyn and Paradowski[30]. Differences in stool characteristics were also noted, with UC patients showing looser stools (Bristol type 7) compared to CD patients ($p < 0.001$).

The study found significant differences in FC and C-reactive protein (CRP) levels, with UC patients showing higher FC levels ($p = 0.002$) and CD patients showing higher CRP levels ($p = 0.027$). Anemia was more prevalent in UC patients, linked to chronic blood loss and inflammation, consistent with ***Alves et al.***[31] and ***Tulewicz-Marti et al.***[32].

UC complications included acute severe colitis (11.7%) and toxic megacolon (2.5%), while CD patients exhibited higher rates of strictures (43.7%) and perianal disease (31.3%) ($p < 0.001$). These findings corroborate studies by ***Elbadry et al.***[14] and ***Brochard et al.***[33].

UC patients were more likely to receive medical treatment alone (96.3%), while CD patients required combined medical and surgical interventions more frequently (13.2%, $p = 0.004$). Systemic steroids and biologic therapies were also more commonly used in CD, reflecting its more severe clinical course[9, 14].

While smoking is widely recognized as protective against the development of UC and a risk factor for CD, our findings align with the study by ***Chen et al.***[34], which reported that smoking prevalence was lower in UC patients compared to controls (20.9% vs. 30.4%, $p < 0.01$), but there was no significant difference in smoking prevalence between CD patients and controls (19.8% vs. 22.1%, $p = 0.60$). The comparable smoking prevalence in our cohort could be attributed to regional and sociocultural factors that influence smoking behavior. In areas with high baseline smoking prevalence, UC patients may not entirely avoid smoking despite its protective effect due to other factors, such as symptom relief or social norms. Conversely, CD patients may already be smokers before diagnosis, contributing to the observed prevalence in both groups.

Additionally, as highlighted by ***Chen et al.***[34], smoking cessation before diagnosis is associated with a shift in risk, particularly in UC patients, where disease risk and severity increase post-cessation. This suggests that past smoking behavior and its timing relative to disease onset could partially account for the comparable prevalence observed in UC and CD patients in our study.

The study has several limitations. The single-center design limits the generalizability of the findings to other regions or populations. Additionally, the relatively small sample size, particularly for Crohn's disease patients, may have reduced the statistical power to detect subtle differences. Lastly, the lack of long-term follow-up data prevents an assessment of disease progression, treatment outcomes, and the impact of emerging therapies on patient prognosis.

CONCLUSION

In conclusion, this study highlights significant differences in the epidemiological, clinical, and treatment characteristics of ulcerative colitis and Crohn's disease patients in the Nile Delta region. Ulcerative colitis was more prevalent, with a milder clinical course primarily managed with medical therapy, while Crohn's disease presented more complications and often required combined medical and surgical interventions. These findings underscore the need for tailored management strategies and improved access to advanced therapies to address the distinct challenges posed by each condition. Further multicenter studies with larger sample sizes and long-term follow-up are essential to validate and expand upon these results.

CONFLICT OF INTERESTS

There is no conflicts of interest.

DECLARATION OF CONFLICTING INTERESTS

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CONTRIBUTION

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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الخصائص الوبائية والإكلينيكية لمرضى أمراض الأمعاء الالتهابية في دلتا النيل

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الخلفية: أمراض الأمعاء الالتهابية، والتي تشمل التهاب القولون التقرحي ومرض كرون، هي حالات مزمنة تشهد زيادة في معدل انتشارها عالميًا.

هدف الدراسة: هدفت هذه الدراسة إلى تقييم الخصائص الوبائية والإكلينيكية والعلاجية لمرضى أمراض الأمعاء الالتهابية في مستشفى جامعة طنطا.

الطرق: تم إجراء تحليل استعادي لـ ٢١٥ مريضًا، منهم ١٦٢ يعانون من التهاب القولون التقرحي و٥٣ يعانون من مرض كرون. تم تقييم البيانات الديموغرافية، الأعراض السريرية، الأمراض المصاحبة، المضاعفات، واستراتيجيات العلاج.

النتائج: كان التهاب القولون التقرحي أكثر شيوعًا من مرض كرون بنسبة ٣:١. بلغ متوسط أعمار مرضى التهاب القولون التقرحي ٣٥,٢٧ عامًا، بينما بلغ ٣٧,٩٤ عامًا لمرضى مرض كرون. كان ألم البطن والنزيف الشرجي أكثر الأعراض شيوعًا في التهاب القولون التقرحي، بينما كان مرضى كرون يعانون من معدلات أعلى من ألم البطن والتقيؤ. كانت المضاعفات أكثر شيوعًا في مرض كرون (٣٠,٢٪) مقارنة بالتهاب القولون التقرحي (١٦,٧٪). كان العلاج الدوائي هو السائد في التهاب القولون التقرحي (٩٦,٣٪)، بينما تطلب مرض كرون مقاربة علاجية تجمع بين العلاج الدوائي والجراحي بشكل أكثر تكرارًا (١٣,٢٪).

الاستنتاجات: تسلط الدراسة الضوء على الفروقات الكبيرة في الخصائص السريرية وأساليب علاج التهاب القولون التقرحي ومرض كرون في منطقة دلتا النيل. استفاد مرضى التهاب القولون التقرحي بشكل أساسي من العلاج الدوائي، بينما واجه مرضى كرون مسار مرض أكثر شدة تطلب نهجًا متعدد التخصصات.