

CLINICAL FEATURES OF CROHN'S DISEASE AND ULCERATIVE COLITIS

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(Received, 15th February 2023, Revised 04th June 2023, Published 20th July 2023)

Abstract: *The retrospective study was conducted in the Department of Gastroenterology, THQ Hospital, from March 2020 to March 2021 to assess CD and UC's clinical characteristics and demographic features in a relatively diverse group of patients. The study included patients diagnosed with IBD. The questionnaire was used to gather data regarding clinical and demographic features, disease duration, family history of IBD, surgical interventions, extra-intestinal manifestations, and clinical and socio-economic variables relevant to CD and UC patients. 500 patients were included in the study, of which 135 (28%) had CD and 365 (73%) had UC. UC patients predominantly had bloody diarrhea and/or hematochezia, while CD patients had abdominal pain. 50% of CD patients required surgical intervention, compared to only 9.8% of UC patients. Evaluation of chemotherapy showed that 66.6% of CD patients and 37.8% of UC patients received steroid therapy. 22 (6%) UC patients and 7 (5.1%) CD patients had a family history of IBD (P=.819). The most frequent extra-intestinal complication in UC patients was PSC; it was acute arthropathy in CD patients. It is concluded that the peak age of disease onset in UC and CD patients is similar to other Asian countries. There was non-significant male predominance for UC and CD. Diagnosis of CD is delayed compared to UC, which may be due to negligence towards disease symptoms.*

Keywords: Inflammatory Bowel Disease, Crohn's Disease, Ulcerative Colitis

Introduction

Inflammatory bowel disease (IBD) is a group of disorders that affects the colon and small intestine and have similar clinical presentation (Gulamhusein and Hirschfield, 2020). Crohn's disease (CD) and ulcerative colitis (UC) are the most common forms of IBD. Extensive research has been done on IBD's etiology and demographical, geographical, socio-economic, and occupational distribution (Selvaratnam et al., 2019). The incidence of UC and CD has stabilized in many American and European regions. On the other hand, its prevalence is increasing in regions where it has been uncommon. IBD is a major health burden, and the incidence of UC and CD is evenly divided, with a slightly higher prevalence of UC in males and females (ILTAR et al., 2020). Both diseases are more common in higher socio-economic groups. Though the previous studies on ethnic and racial analysis show that IBD has a higher occurrence in Jewish and Caucasian subgroups than in other populations, recent data suggest that its prevalence among racial and ethnic groups is dynamic (Shelygin et al., 2023). As a result, incidence varies widely, partly due to different diagnostic criteria (Topal et al., 2020; Ünal et al., 2019). There is limited data about IBD in Pakistan, and because of varying ethnicities, epidemiological data about less common diseases requires wider sampling. Despite such limitations, these studies provided some insight into the prevalence and incidence of IBD (Arain et al., 2021; Khan et al., 2020). This study aimed to assess CD and UC's clinical characteristics and demographic features in a relatively diverse group of patients.

Methodology

The retrospective study was conducted in the Department of Gastroenterology, THQ Hospital, from March 2020 to March 2021. The study included patients diagnosed with IBD. Informed consent of the participants was taken. The ethical board of the hospital approved the study. The questionnaire was used to gather data regarding clinical and demographic features, disease duration, and family history of IBD, surgical interventions, extra-intestinal manifestations, and clinical and socio-economic variables relevant to CD and UC patients. The data was collected from medical records or through face-to-face interviews. Extra intestinal diseases diagnosed after, before or concurrent with IBD were included in the questionnaire for extra-intestinal manifestations. Data regarding urinary tract, eye, liver, musculoskeletal and mucocutaneous involvement was recorded. Primary sclerosing cholangitis (PSC) was diagnosed through liver biopsy and radiographic evidence of sclerosing cholangitis and persistently elevated alkaline phosphatase and gamma-glutamyl transferase levels for 3 months. If patients had limited movement of the lumbar spine, limited chest expansion, asymmetric oligoarthritis, and inflammatory back pain, a pelvic x-ray was performed for sacroiliac joints. Ankylosing spondylitis was classified according to the modified New York criteria (Bayrak, 2022). Duration between symptom onset and final diagnosis was determined.

SPSS version 23 was used for data analysis. Quantitative data was represented as frequency and percentages, and qualitative data as mean and standard deviation. Non-parametric and parametric tests were performed according to data type. P value < 0.05 was considered statistically significant.

Results

Five hundred patients were included in the study, of which 135 (28%) had CD and 365 (73%) had UC. The mean age of UC patients was 46.1 years, and that of CD patients was 41 years, a significant age difference (P<.001). 57(42.2%) CD and 47 (12.8%) UC patients were smokers. The mean duration of disease in both CD and UC was 9.8 years. The male-to-female rate in UC was 1.3, and in CD, it was 1.6 (P=.12). In 16 (11.8%) CD patients and 73 (20%) UC patients, initial symptoms appeared during pregnancy. UC patients predominantly had bloody diarrhea and/or hematochezia, while CD patients had abdominal pain (Table I). 50% of CD patient's required surgical intervention compared to only 9.8% of UC patients. 35 (25.9%) patients with CD and 11 (3%) UC patients underwent appendectomy (P <.001). 8.8% of CD patients had tonsillectomy compared to 2.4% UC patients (P=.148). UC patients underwent subtotal colectomy (n=4), primary suture because of perforation during colonoscopy (n=4), and ileal pouch and ileoanal anastomosis (n=28). Evaluation of chemotherapy showed that 66.6% of CD patients and 37.8% of UC patients received steroid therapy.

Among patients with CD remission, 37.7% received sulfasalazine or mesalamine alone, 29% received azathioprine alone, 28% received a combination of sulfasalazine or mesalamine and azathioprine, and 1.4% received methotrexate. 4% of patients did not receive any medication. 97% of patients in UC remission received oral/tropical sulfasalazine or mesalazine, and 3% received immunosuppressive therapy.

22 (6%) UC patients and 7 (5.1%) CD patients had a family history of IBD (P=.819). The extent of the disease was evaluated by ultrasonography, biopsy, and endoscopy. Among UC patients, 31% had proctitis, 28.7% had left-sided colitis and 37.8% had pancolitis and extensive colitis. Among patients with CD, disease extended to terminal ileum in 23.7%, colon in 20.7%, ileocolon in 53.3%, and upper gastrointestinal tract in 0.7%. The most frequent extra-intestinal complication in UC patients was PSC, while acute arthropathy in CD patients (Table II).

The mean duration between the onset of symptoms and diagnosis was 19.1 and 12.2 months in CD and UC, respectively (P=.002). Both CD and UC patients had an average of 1.6 relapses. 17% of UC and 0.7% of CD patients had initial misdiagnosis.

Table I Predominant complaints in UC and CD

	CD n(%)	UC n(%)
Abdominal pain	109 (80.7%)	51 (13.9%)
Weight loss	39 (28.8%)	24 (6.5%)
Bloody diarrhea and hematochezia	23 (17%)	332 (90%)
Fever	9 (6.6%)	7 (1.9%)

Table II Complications in UC and CD patients

	Complications	CD n(%)	UC n(%)
Extra-intestinal	Acute arthropathy	11 (8.1%)	10 (2.7%)
	Sacroileitis	5 (3.7%)	4 (1%)
	Ankylosing spondylitis	5 (3.7%)	5 (1.3%)
	Ocular problems	3 (2.2%)	4 (1%)
	Erythema nodosum	4 (2.9%)	1 (0.2%)
	Pyoderma gangrenosum	0	0
	PSC	6(4.4%)	12 (3.2%)
Acute local	Intestinal obstruction	51 (37.7%)	0
	Internal fistulae	22 (16.2%)	0
	Toxic megacolon	1 (0.7%)	2 (.5%)
	Perforation	15 (11.1%)	4 (1%)
	Abscess	17 (12.5%)	0

Discussion

In this study, we assessed CD and UC's clinical characteristics and demographic features in a relatively diverse group of patients. In this study, the mean age of UC patients was 46.1 years, and that of CD patients was 41 years, a significant age difference. This was similar to the results of the previous studies, which reported that UC patients were significantly older (Aniwan et al., 2022; Seyedian et al., 2019). In our study, UC patients had slight male predominance. This is unlike the results of a previous study, which reported the male-to-female ratio in UC patients to be 1/1.2 and in CD to be 1/1.3 (Mak et al., 2020). Moreover, in our study, non-smokers had a higher risk of UC, in contrast to a previous study that reported smoking as the risk factor for UC (Gupta et al., 2022). Another study found that 31% UC patients had a history of smoking, while

16% were current smokers (ILTAR et al., 2020). Our study's total number of surgeries in CD patients was comparable to the previous study (Sharif et al., 2020). Despite the lingering duration between the onset of symptoms and disease diagnosis compared to other studies, there was a marked difference in the need for surgical intervention. The results show that the rate of misdiagnosis and late diagnosis is higher in CD. The mean duration between the onset of symptoms and diagnosis was 19.1 and 12.2 months in CD and UC, respectively. This may be due to various reasons. First, IBD has non-specific early symptoms, which can be neglected by both the patient and the physician. Second, a high prevalence of hemorrhoids and infectious diseases can lead to misdiagnosis. Third, patients are hesitant to undergo endoscopic procedures, which delay the diagnosis. The limitation of the current study is the exclusion of the socio-economic status of patients and data collection from a single

[Citation Malik, Z., Shahid, H.A, Malik, M. (2023). Clinical features of crohn's disease and ulcerative colitis. *Biol. Clin. Sci. Res. J.*, 2023: 387. doi: <https://doi.org/10.54112/bcsrj.v2023i1.387>]

center. A large-scale and more diverse study is recommended for further valuation.

Conclusion

The peak age of disease onset in UC and CD patients is similar to other Asian countries. There was non-significant male predominance for UC and CD. Diagnosis of CD is delayed compared to UC, which may be due to negligence towards disease symptoms.

Declarations

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate.

Approved by the Department Concerned

Consent for publication

Received

Funding

Not applicable

Conflict of interest

The authors declared an absence of conflict of interest.

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