

ORIGINAL ARTICLE**A STUDY ON CLINICAL PROFILE OF PATIENTS WITH INFLAMMATORY BOWEL DISEASE****Sadiquul Islam¹, Mayank Agarwal², Anjam J Talukdar¹, Sangitanjan Dutta³, Partha P Kalita⁴****Author's Affiliations:** ¹Assistant Professor, ³Professor, ⁴Student, Dept. of Medicine, GMCH, Guwahati; ²Consultant, Guwahati, Assam**Correspondence:** Dr Sadiquul Islam E-mail: drsadiquulislam@gmail.com**ABSTRACT****Introduction:** Inflammatory Bowel Disease (IBD) is an immune mediated chronic intestinal condition. Crohn's Disease (CD) and Ulcerative Colitis(UC) are the two major types of IBD.**Aims and Objectives:** i) To study the prevalence of IBD in Gauhati Medical College and Hospital.ii) To study the clinical profile of patients with IBD.**Materials and Methods:** A total of 38 patients of IBD were enrolled in this prospective observational hospital based study. The study was conducted from July 2014 to June 2015. All patients presenting to the department of Medicine, Gauhati Medical College and Hospital with history suggestive of IBD were evaluated through history taking, clinical evaluation and laboratory investigation as per requirement of the patients.**Results:** The hospital prevalence of UC was found to be 22.99 and of CD was 9.37 per 100,000 persons. Males were more affected than females in both UC and CD. The most common clinical features of UC were rectal urgency, increased frequency of stools, blood in stools, tenesmus, mucus in stools, loose stools and abdominal pain whereas in CD abdominal pain, loose stools, weight loss and mucus in stools were the common clinical presentations. Extraintestinal manifestations were seen in 11.11% of UC patients and 27.27% of CD patients with arthralgia being the most common.**Conclusion:** Since this was a hospital based study with a small sample size, a larger study recruiting more patients with a longer duration of follow up is necessary for a better understanding of the disease and to arrive at definite conclusion.**Keywords:** IBD, CD, UC, CDAI**INTRODUCTION**

Inflammatory Bowel Disease comprises conditions characterized by chronic or relapsing immune activation and inflammation within the gastrointestinal tract(GIT). Crohn's Disease(CD) and Ulcerative Colitis(UC) are the two major forms of idiopathic IBD.¹ The major symptom of UC are diarrhea, rectal bleeding, tenesmus, passage of mucus and crampy abdominal pain. CD usually presents with ileocolitis or jejunoillitis.² UC is a condition in which the inflammatory response and morphologic changes remain confined to the colon. The rectum is involved in 95% of patients. CD in contrast to UC can involve any part of the GIT from oropharynx to the perianal area.³ The diagnosis of IBD is usually established through a global assessment of the clinical presentation, radiographic, endoscopic and pathologic findings.⁴

Many studies have been published describing various aspects of the disease from Europe and the United

States over the past 50 years. However, more data is required from India to study the disease course in our country. The earlier studies reported from India suggested low incidence of the disease and a milder disease pattern. However, subsequent reports in the late nineties have reported a more aggressive course of the disease.⁵

There has been few Indian studies which have evaluated patients with Inflammatory Bowel Disease and no such study has ever been done in North East till date. The present study will assess the magnitude of the disease in a tertiary medical care in North Eastern India and study its clinical profile.

METHODOLOGY

This was an observational study conducted at Department of Medicine, Gauhati Medical College and Hospital, Guwahati, Assam for one year.

All diagnosed cases of IBD were included in the study. Patients were included after proper informed written consent. The study was conducted after permission obtained from the Institutional Ethics Committee of Gauhati Medical College & Hospital.

Evaluation: All the patients were subjected to routine biochemistry evaluation, complete hemogram, liver and renal functions, stool culture/sensitivity and occult blood, colonoscopy and biopsy, radioimaging and special investigation as were required.

Statistical Analysis: All cases were analyzed by age, gender, clinical features, laboratory investigations, disease severity and location, colonoscopic findings, histopathological features, initial and maintenance treatment, in remission or relapsed and complication. All data were analysed statistically using GraphPad InStat 3 software.

RESULTS

During the study period a total of 38 patients with the diagnosis of IBD were registered and followed up. Of these, 27 patients were of UC and 11 were of CD.

Among patients with UC majority of patients were in the age group 20 – 39 years at the time of diagnosis of their illness constituting 51.86% of the total. Among patients with CD, majority were in the age group 16 – 40 years at the time of diagnosis constituting 81.81%.

Among UC patients 59.26% were male and 40.74% were female. The M:F ratio was 1.45:1. Among CD patients 54.54% were male and 45.45% were female. The M:F ratio was 1.2:1.

Among UC patients most common clinical features were rectal urgency (100%). Increased frequency of stools (96.30%), blood in stools (92.59%), mucus in stools (88.89%), tenesmus (92.59%) and loose stools (88.89%) were also present in majority of patients. Among CD patients most common clinical feature was abdominal pain (90.91%). Loose stools and weight loss was reported by 63.64% of patients and mucus in stools by 54.55%.

Majority of UC patients were having moderate disease at presentation, constituting 56.25% in males, 63.64% among females and 59.26% in the whole group.

Majority of CD patients had a CDAI score of <150 at presentation constituting 63.63% of patients.

Table 1: Age at diagnosis of UC and CD patients

Age group(yrs)	UC (n=27)(%)	CD (n=11)(%)
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<20	1(3.70)	0(0)
20-29	7(25.93)	4(36.36)
30-39	7(25.93)	5(45.45)
40-49	3(11.11)	1(9.09)
50-59	6(22.22)	1(9.09)
>=60	3(11.11)	0(0)

Table 2: Sex distribution of UC and CD patients

Gender	UC (n=27)(%)	CD (n=11)(%)
Male	16(59.26)	6(54.54)
Female	11(40.74)	5(45.45)

Table 3: Clinical features of UC and CD

Variable	UC (n=27)(%)	CD (n=11)(%)
Abdominal pain	21(77.78)	10(90.91)
Blood in stools	25(92.59)	3(27.27)
Mucus in stools	24(88.89)	6(54.55)
Rectal urgency	27(100)	0(0)
Tenesmus	25(92.59)	2(18.18)
Loose stools	24(88.89)	7(63.64)
Increased frequency	26(96.30)	1(9.09)
Perianal symptoms	1(3.70)	2(18.18)
Mouth ulcer	1(3.70)	1(9.09)
Weight loss	5(18.52)	7(63.64)
Fever	0(0)	3(27.27)

Table 4: Disease severity (Truelove and Witt's criteria) at presentation in UC patients

Disease severity	Male (%)	Female (%)	Total (%)
Mild	3(18.75)	1(9.09)	4(14.81)
Moderate	9(56.25)	7(63.64)	16(59.26)
Severe	4(25)	3(27.27)	7(25.93)

Table 5: Cronhs's Disease Activity Index (CDAI) score of CD patients at presentation

CDAI score	No. (%)
<150	7(63.63)
150-220	3(27.27)
221-450	1(9.09)
>450	0(0)

Among UC patients, majority of the patients had extensive colitis (44.44%) followed by left sided colitis (37.04%). Among the CD patients majority of the patients had L1 disease (54.54%). However 3 of 6 patients had concomitant jejunal involvement.

All patients with UC had an abnormal colonoscopy whereas only 36.36% of CD patients had abnormal colonoscopy. Most common features on colonoscopy in UC patients were erythema (100%) and involve-

ment of the rectum (100%), followed by loss of vascular pattern (85.19%). Granularity and friability was seen in 81.48% of cases.

Table 6: Localisation of disease in UC patients

Ulcerative Colitis		Crohn's Disease	
Location	Total (%)	Location	Total (%)
Extensive colitis	12(44.44)	Illeal(L1)	6(54.54)
Left sided collitis	10(37.04)	Colonic (L2)	0(0)
Proctosigmoiditis	5(18.52)	Illeocolonic(L3)	3(27.27)
Proctitis	0	Isolated upper GIT disease(L4)	2(18.18)

Table 7: Histopathologic examination features in UC.

Ulcerative Colitis		Crohn's Disease	
HPE Features	Total(%)	HPE Features	Total(%)
Lymphoplasmacytic infiltration	27(100)	Mucosal inflammation	6(54.54)
Glandular disarray	25(92.59)	Ulceration	6(54.54)
Cryptitis	24(88.89)	Transmural inflammation	2(18.18)
Crypt abscesses	22(81.48)	Granuloma	2(18.18)

Among UC patients most common finding on biopsy examination of tissue was lymphoplasmacytic infiltration (100%). Glandular disarray (92.59%), cryptitis (88.89%) and crypt abscesses (81.48%) were present in majority of patients. Among CD patients the most common finding on HPE were mucosal inflammation (54.54%) and ulceration (54.54%) followed by transmural inflammation (18.18%) and non caseating granulomas (18.18%).

DISCUSSION

This study was conducted in Gauhati Medical College and Hospital, Guwahati from July 2014 to June 2015. During this study titled "A Study of Clinical Profile of Patients with Inflammatory Bowel Disease", 38 cases were identified and followed up and an attempt has been made to study the prevalence and clinical profile of these IBD patients.

Age at Diagnosis:

Ulcerative Colitis: In our study maximum patients (51.86%) were in the age group 20-39 years.

Tandon BN et al (1965)⁹ reported maximum number of patients in 15-44 years (72.5%)

Crohn's Disease: In our study majority (88.18%) were in age group 16-40 years. Helmi I et al(2006)¹⁰ reported majority(76.5%) in the age group 16-40 years. Thia KT et al (2006)¹¹ repoted majority (65%) in the age group 16-40 years.

Sex Distribution:

Ulcerative Colitis: In our study 59.26% were male and 40.74% were female with male: female ratio of 1.45:1. Similar male predominance was reported by Tandon BN et al (1965), Aghazadeh R et al(2004)¹², Jiang Let et al(2006)¹³ with male: female ratio of 1.5:1, 1.3:1 and 1.53:1 respectively.

Crohn's Disease: In our study 54.54% were male and 45.45 % were female with male: female ratio of 1.2:1. Similar male predominance was reported by Pai et al (2000)¹⁴, Benjamin J(2008)¹⁶ and Pulimood AB et al(2011)¹⁵ with male: female ratio of 1.08:1, 1.1:1 and 1.26:1 respectively.

Clinical presentation:

Ulcerative Colitis: Intestinal Manifestation: In our study common clinical features wee increased frequency of stools (96.3%), blood (92.59%) and mucus (88.89%) in stools, tenesmus (92.59%) and loose stools (88.89%).

Sood et al (2003)⁵ reported abdominal pain (100%), blood in stool (82.61%), mucus in stool (100%) rectal urgency (100%).

Crohn's Disease: In our study common clinical features were abdominal pain(90.91%), loose stools and weight loss blood(63.64%), mucus in stools(54.55%), blood in stools and fever(27.27%).

Pai et al (2000)¹⁴ reported abdominal pain (84%), blood in stool(44%), loose stool(80%), fever(16%) and weight loss(88%)

Extraintestinal Manifestation:

Ulcerative Colitis: In our study extraintestinal manifestation were seen in 11.11% of UC patients and 27.27% of CD patients. VelosoFT et al(1996)¹⁶ and Vind I et al(2006)¹⁷ have reported extraintestinal manifestations were more common in CD than in UC.

Crohn's Disease: In our study, among CD patients, most common extraintestinal manifestations were arthralgia(27.27%). Stein et al (1993)¹⁸ observed arthralgia in 44% of CD patients and Desai et al in 24% of CD patients.¹⁹

CONCLUSION

In the present study an attempt has been made to study the prevalence and clinical spectrum in patients diagnosed to have Inflammatory Bowel Disease. Among a total of 38 patients of Inflammatory Bowel Disease 27 had Ulcerative Colitis and 11 had Crohn's disease. Presenting complaints in majority of Ulcerative colitis patients were rectal urgency, increased frequency of stools, blood and mucus in stools, loose stools and abdominal pain. Most of crohn's disease patients presented with abdominal pain, loose stools, weight loss and mucus in stools. Half of Ulcerative

Colitis patients and nearly all Crohn's disease patients were anemic.

Since this was a hospital based study with a small sample size, a larger study recruiting more patients with a longer duration of follow up is necessary for a better understanding of the disease and to arrive a definite conclusion.

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