

# COLONOSCOPIC EXTENT AND SEVERITY AT FIRST PRESENTATION IN PATIENTS OF ULCERATIVE COLITIS

Irfan Ahmad,<sup>1</sup> Umar Khalid<sup>1</sup>

## ABSTRACT

**Background:** Ulcerative colitis is a chronic inflammatory disease of colon, which is infrequently seen in our population. Its various features have been described in few national studies but characteristics of this disease especially the colonoscopic features have not been studied in our area.

**Objective:** To determine the extent and colonoscopic severity when patients of ulcerative colitis present first time.

**Methodology:** This was a cross sectional study, conducted on record of all the patients who underwent colonoscopy in medical department of Sheikh Zayed Medical College/Hospital, Rahim Yar Khan from 1<sup>st</sup> August 2007 to 31<sup>st</sup> August 2018 and found to be a case of ulcerative colitis was scrutinized. Sample size was 244. Age, gender, presenting symptoms, and colonoscopic extent and severity were recorded. Data was entered and analyzed in SPSS version 20.

**Results:** A total of 244 patients were included in study. Their mean age was 33.57 years and 60 % were male. Chronic bloody diarrhea was the presenting complaint in 87 % of the patient. Proctitis alone was present in 25.8 % of patients, proctosigmoiditis in 27.5 %, left sided colitis in 18.4 %, extensive colitis in 17.2 % and pancolitis in 11.1 %. Moderate endoscopic severity was more common (62.3 %). Mild disease was seen in 15.6 % and severe in 22.1 %.

**Conclusion:** Most common presenting features were chronic bloody diarrhea proctosigmoiditis and left sided colitis showing extent of disease. Our results match those of other national and international studies regarding age and gender distribution, and colonoscopic extent and severity of ulcerative colitis.

**Keywords:** Ulcerative Colitis, Colonoscopic Extent, Colonoscopic Severity

## INTRODUCTION

Ulcerative colitis is chronic inflammatory condition, which involves mucosa of the colon and has relapsing and remitting course.<sup>1,2</sup> It almost invariably involves the rectum and extends proximally in continuous pattern affecting varying length of colon upto cecum.<sup>3</sup> It may involve terminal ileum (backwash ileitis).<sup>4</sup> Highest incidence of ulcerative colitis is seen in Europe and North America.<sup>2,3,4</sup> On the other hand, it is less common in Asia and Africa but its prevalence is also increasing in developing countries.<sup>1,3</sup>

Ulcerative colitis is the most common cause of chronic bloody diarrhea.<sup>4</sup> Other presentations are diarrhea without blood, small volume stools with pus, urgency and tenesmus.<sup>5</sup> These symptoms may be associated with abdominal pain, and in severe cases, fever and systemic upset.<sup>6</sup> Ulcerative colitis is more common in young male.<sup>5,6</sup> Involvement of distal colon (rectum and sigmoid colon) is more common (30–50%) than extensive colonic involvement.<sup>7,8</sup> Colonoscopic severity of the disease varies among the studies.<sup>5,7,8</sup> There is no correlation between clinical and endoscopic severity.<sup>4,5</sup>

True prevalence of ulcerative colitis is not known

in our country but national data is available about its demographics, clinical and endoscopic features in various studies.<sup>7-10</sup> Our region lacks research regarding ulcerative colitis.

The objective of this study was to determine extent of colonic disease and endoscopic severity at the time of diagnosis of ulcerative colitis.

## METHODOLOGY

**Study design:** Cross sectional study. **Study site:** Department of Medicine, Sheikh Zayed Medical College/Hospital, Rahim Yar Khan. All patients who underwent colonoscopy in department of medicine from 1<sup>st</sup> August 2007 to 31<sup>st</sup> August 2018 and their endoscopic biopsy revealed the diagnosis of ulcerative colitis were included in this study. Following patients were excluded from study:

- Who have already been diagnosed as a case of ulcerative colitis during previous sigmoidoscopy/ colonoscopy
- Who underwent limited sigmoidoscopy due to severe disease or for any other reason and their extent of disease had not been ascertained.

The record of endoscopic unit was scrutinized to include patients meeting inclusion and exclusion criteria. The age and gender of the patient, the

1. Department of Medicine, Sheikh Zayed Medical College/Hospital, Rahim Yar Khan, University of Health Sciences, Lahore, Pakistan.

**Correspondence:** Dr. Irfan Ahmad, Associate Professor, Department of Medicine, Sheikh Zayed Medical College/Hospital, Rahim Yar Khan, Pakistan.

**Email:** uhirfan@yahoo.com

**Phone:** +92-333-4365708

**Received:** 24-10-2018

**Accepted:** 15-11-2018

**Published:** 26-02-2019

indications for the procedure, and endoscopic extent and severity of the disease were recorded.

Extent of the disease was expressed as:<sup>9</sup>

- Proctitis – disease limited to rectum
- Proctosigmoiditis – disease involving rectum and sigmoid colon
- Left sided colitis – disease involving colon from rectum to splenic flexure
- Extensive colitis – disease extending proximal to splenic flexure but sparing cecum
- Pancolitis – disease involving whole of the colon including cecum

Severity of the disease was described according to Mayo endoscopic score of activity:<sup>10</sup>

- Mild colitis – loss of vascularity, erythema
- Moderate colitis – above findings plus friability, contact bleeding, erosions
- Severe colitis – ulcerations, spontaneous bleeding

The data was entered and analyzed using SPSS version 25. The qualitative data was expressed as frequency and percentage. The quantitative data was expressed as mean  $\pm$  SD and range. A p value of  $< 0.05$  was considered to be significant. Study protocol was approved from Institutional Review Board and Ethical Committee.

## RESULTS

Among patients undergoing colonoscopy in endoscopic unit of medical department of Sheikh Zayed Medical College/Hospital, 244 patients met inclusion and exclusion criteria. Their demographic features and presenting symptoms are given in Table I. Minimum age of presentation was 15 years and maximum 85 years. When comparing age groups, 187 (76.64 %) patients found to be between 15 and 40 years, 48 (19.67 %) patients were between 41 to 60 years and 9 (3.69 %) were above sixty years of age.

**Table I: Demographic features and presenting symptoms of patients**

Age (mean $\pm$ SD) in years	33.57 $\pm$ 12.76
<b>Gender – number (%)</b>	
Male	147 (60.2 %)
Female	97 (39.8 %)
<b>Presenting symptoms – number (%)</b>	
Chronic bloody diarrhea	213 (87.3 %)
Chronic non-bloody diarrhea	30 (12.3 %)
Constipation	1 (0.4 %)

Mean age of male patients was  $33.34 \pm 11.83$  years and mean age of female patients was  $33.92 \pm 14.10$  years; there was no significant difference between male and female patients mean ages ( $p = 0.491$ ).

As shown in Table II, distal colonic involvement was more common; 130 (53.3%) patients had involvement of rectum only or rectum and sigmoid colon. There was no significant difference between mean ages of patients having different extent of colonic involvement ( $p = 0.776$ ). Similarly, disease extent was not different between male and female patients ( $p = 0.06$ ).

**Table II: Colonoscopic extent of ulcerative colitis**

Extent of Disease	No (%)
Proctitis	63 (25.8 %)
Proctosigmoiditis	67 (27.5 %)
Left sided colitis	45 (18.4 %)
Extensive colitis	42 (17.2 %)
Pancolitis	27 (11.1 %)

Most patients 152 (62.3 %) had moderate endoscopic severity (Table III). Mild disease was common in males (76 %) but it has no statistical significance ( $p = 0.083$ ). Different endoscopic severities also have no mean age statistical difference ( $p = 0.877$ ). Twenty one patients having proctitis and 12 having proctosigmoiditis had milder disease while only 3 patients having left sided colitis and 2 having pancolitis had mild disease ( $p < 0.05$ ).

**Table III: Colonoscopic severity of ulcerative colitis**

Severity	No (%)
Mild	38 (15.6 %)
Moderate	152 (62.3 %)
Severe	54 (22.1 %)

## DISCUSSION

Although ulcerative colitis is not a common disease in our area but we do see these patients occasionally in our medical OPD or patients with severe disease are admitted in medical wards. As the disease is chronic with relapsing and remitting course, so patients used to consult with each relapse. Some patients are refractory to usual treatment and we have to refer them for surgery due to non-affordability of most of our patients for biological agents. In this study we analyzed our data of ulcerative colitis patients looking specifically into extent and endoscopic severity of the disease.

Most commonly, patient presents between the age of 15 and 40 years. A second peak age incidence occurs

from 50 to 80 years.<sup>11</sup> Similar results were seen in our study; most of patients (77%) were between 15 and 40 years. Other national studies showed variable results, like more patients between 26 to 35 years,<sup>12</sup> 30 to 50 years<sup>13</sup> and 10 to 30 years.<sup>5</sup> Mean age of our patients was 33.5 years and it was consistent with another national study (31.8 years).<sup>14</sup> Ulcerative colitis is more common in male<sup>5,13-15</sup>; in our study 60 % patients were male; in a study from KPK, 64 % were male.<sup>5</sup> The most common presentation of patients was chronic bloody diarrhea in our study (87 %) which is consistent with other studies (92 %, 90 %).<sup>5,13</sup> Regarding extent of disease, distal colon is the most common site of the disease. We found that 53 % of our patients have distal colitis (proctitis in 26 % plus proctosigmoiditis in 27 %) and it is consistent with national (38 %) and international (44 %, 52 %) studies.<sup>14-16</sup> In our study, moderate colonoscopic severity was more common (62 %). Moderate severity was also more common in a study by Khalid Hameed et al<sup>14</sup> (47 %) and Langholz E et al<sup>8</sup> (71 %) but in second study, clinical parameters were also included in assessing disease severity. Our results also revealed that age and gender have no effect on extent and endoscopic severity of the disease but milder disease was significantly more common in the rectum.

## CONCLUSION

In conclusion, our study showed that in our ulcerative colitis patients, proctitis and distal colitis are more common followed by left sided colitis, extensive colitis and pancolitis. Similarly, moderate endoscopic disease severity is more common than mild and severe disease. Regarding these two parameters, age and gender distribution, and mode of presentation, our results generally match results of national and international studies.

**Authors Contribution:** **IR:** Study Idea, article wrtieup, Literature review. **MUK:** Data collection and Data analysis. Both authors critically revised and approved its final version.

**Conflict of Interest:** None

**Sources of Funding:** None

## REFERENCES

1. Molodecky NA, Soon IS, Rabi DM, Ghali WA, Ferris M, Chernoff G, et al. Increasing incidence and prevalence of the inflammatory bowel disease with time, based on systematic review. *Gastroenterology* 2012; 142 (1):46-54
2. Ng SC, Tang W, Ching JY, Wong M, Chow CM, Hui AJ, et al. Incidence and phenotype of inflammatory bowel disease based on results from the Asia-pacific Crohn's and colitis epidemiology study. *Gastroenterology* 2013; 145 (1):158-65
3. Ng SC, Shi HY, Hamidi N, Underwood FE, Tang W, Benchimol EL, et al. Worldwide incidence and prevalence of inflammatory bowel disease in 21th century: a systematic review of population based studies. *Lancet* 2018; 390:2769-78
4. Nadeem Zia, Tassarwar Husain, AmjadSalamat, Shakeel Mirza, Fayyaz Hassan, Ayesha Waqar. Diagnostic evaluation of patients presenting with bleeding per rectum by colonoscopy. *J Ayub Med Coll* 2008; 20 (1):73-6
5. Ijaz M Khan, Muhammad Javed, Muhammad Kamran Hassan, Shabir Ahmad Khan, Sher Rehman. Clinical profile of ulcerative colitis. *J Med Sci* 2010; 18 (1):67-70
6. Shivashankar R, Tremaine WJ, Harmsen WS, Loftus EV Jr. Incidence and prevalence of Crohn's disease and ulcerative colitis in Olmsted county, Minnesota from 1970 through 2010. *ClinGastroenterolHepatol* 2017; 15 (6):857-63
7. Nasir Khokhar. Ulcerative colitis: experience at a tertiary care center. *Rawal Med J* 2005; 30 (1):12-5
8. Langholz E, Munkholm P, Nielsen OH, Kreiner S, Binder V, et al. Incidence and prevalence of ulcerative colitis in Copenhagen county from 1962 to 1987. *Scand J Gastroenterol* 1991; 26 (12):1247-56
9. Silverberg MS, Satsangi J, Ahmad T, Arnott ID, Bernstein CN, Brant SR, et al. Toward an integrated clinical, molecular and serological classification of inflammatory bowel disease: report of a working party of the 2005 Montreal World Congress of Gastroenterology. *Can J Gastroenterol* 2005; 19 SupplA:5A
10. Schroeder KW, Tremaine WJ, Ilstrup DM. Coated oral 5-aminosalicylic acid therapy for mildly to moderately active ulcerative colitis. A randomized study. *N Engl J Med* 1987; 317 (26):1625-9
11. Ekbom A, Helmick C, Zack M, Adami HO. The epidemiology of inflammatory bowel disease: a large, population-based study in Sweden. *Gastroenterology* 1991; 100 (2):350-8
12. Sheema Khan, Sarfraz Ahmad, Ghulam Shabbir. Frequency of ulcerative colitis in patients with bloody diarrhea. *Gomal J Med Sci* 2010; 8 (2):12-4
13. Khalid Hameed, Ikramullah Khan. Spectrum of ulcerative colitis in North West Frontier province of Pakistan. *JCPSP* 2002; 12 (8):458-60
14. Khalid Hameed, Ikramullah Khan, Javed Iqbal Farooqi, Sadiq Shah. Correlation of endoscopic extent and severity with the clinical presentation of ulcerative colitis. *JCPSP* 2001; 11 (9):551-4

15. Loftus EV Jr, Silverstein MD, Sandborn WJ, Tremaine WJ, Harmsen WS, Zinsmeister AR. Ulcerative colitis in Olmsted county, Minnesota, 1940 – 1993: incidence, prevalence and survival. *Gut* 2000; 46 (3):336-43
16. Prantera C, Davoli M, Lorenzetti R, Pallone F, Marcheggiano A, Lannoni C et al. Clinical and laboratory indicators of extent of ulcerative colitis. Serum C-reactive protein helps the most. *J Clin Gastroenterol* 1988; 10 (1):41-5

**Article Citation:** Ahmad I, Khalid U. Colonoscopic extent and severity at first presentation in patients of ulcerative colitis. *JSZMC* 2018;9(4): 1531-1534