Original Article

Socio-demographic and Clinical Characteristics of Patients with Ulcerative Colitis at a Tertiary Care Centre in Nepal

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Keywords: Clinical characteristics, Demographics, Inflammatory bowel disease, Ulcerative Colitis

Abstract

Introduction: The prevalence of ulcerative colitis (UC) has gradually increased in Asia over the last few decades. However, there is a paucity of data regarding UC in Nepal. This study analyzed the socio-demographic and clinical characteristics of patients hospitalized with UC.

Methods: This is a hospital based, cross-sectional study. Data was collected among 100 individuals admitted to the hospital with UC from June 2016 to May 2018. A descriptive analysis of the demographic and clinical characteristics was done.

Results: Of the 100 patients 51 were male (M:F ratio 1.04:1). Average age at diagnosis was 38±12.53 years. 55% of the patients were Brahmins, 16% Kshetris, 8% Newars, 1% Muslim while the remaining 20% belonged to other indigenous ethnic groups. 79% of the patients were newly diagnosed cases while remaining 21% were admitted for acute flares of the disease. Rectal bleeding (85%) was the most common symptom followed by diarrhea (70%), tenesmus (63%), urgency (61%), pain abdomen (44%), weight loss (14%), fever (7%) and constipation (4%). Clinically, 41% had mild, 46% had moderate and 12% had severe disease activity. Extra intestinal manifestations were seen only in 12% of the patients. On colonoscopic examination, 41% had proctitis, 46% had left sided colitis and 13% had extensive colitis.

Conclusion: Our study showed some differences in the demographic variables as well as clinical manifestations in the patients when compared to data from the west and even other Asian countries like India and China. Larger population-based studies are needed to better understand the epidemiology and characteristics of the disease in Nepal.

Introduction

PoUlcerative Colitis (UC), a chronic inflammatory disease of unknown etiology involving the colonic mucosa, has been increasing in Asian countries over the last few decades. Epidemiological studies from Japan and Korea have shown that the temporal trend in the incidences of IBD in these regions is related to lifestyle changes and other environmental factors due to rapid urbanization and industrialization.[1,2] A population based study among Indian migrants to the United States found a high prevalence of ulcerative colitis, which also support the role of lifestyle and environmental factors.[3] In India, a population based study in Punjab reported a crude incidence rate of 6.02 cases

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per 100,000 inhabitants, indicating that the disease frequency may not be much lower than those from developed countries.[4] The true prevalence of UC in developing countries like Nepal remains unknown due to lack of proper national registries and population-based studies. Nevertheless, recent review of Asian data shows a brisk increase in both the incidence and prevalence over the past few decades along with considerable variations in the same among various ethnic groups.[5]

Besides the epidemiological variations, the disease phenotype of UC is slightly different in Asia as compared to the west. In general, UC among Asians is more prevalent among males with less family clustering, lower rates of surgery, colorectal cancer and extra intestinal manifestations (EIM). [6,7,8] Even among Asians, the severity, extent and presence of EIM appears to be variable among various nations and ethnic groups.8 Although anecdotal information suggests increasing number of UC patients in Nepal, there is paucity of data regarding the demographic and clinical characteristics of UC in Nepal. The goal of this study was to determine the demographics and clinical nature of UC in a tertiary care center in Nepal.

Methods:

The first 100 UC patients presenting to the Department of gastroenterology, TUTH were included. Data were collected prospectively using questionnaires. The diagnosis of UC was made on the following features - chronic diarrhea or blood in stools, characteristic lesions on endoscopy and chronic inflammatory changes on histopathology. The questionnaires contained the following information: Demographics (Age, Gender, Ethnicity), Symptom distribution, Clinical Severity of the Disease, Extent of the Disease, and Presence of Extra Intestinal Manifestations (EIM). The Truelove and Witt's score was used to classify disease severity (Mild, Moderate and Severe). The extent of the disease was classified according to the Montreal system as E1 (limited to the rectum), E2 (distal to the splenic flexure) and E3 (extension proximal to the splenic flexure).

Mean and Standard Deviation are used to express descriptive statistics. Data analysis was done using Microsoft Excel and SPSS.

Results

Data obtained from 100 patients from January 2017 to December 2018 were analyzed. Among the 100 patients, 79 were new patients while the remaining 21 visited the hospital for acute flares of the disease. Males were marginally more affected with a male to female ratio of 1.04:1. The mean age of the patients was 38.04 with a standard deviation of 12.53. The most common age group of presentation was between 26 to 45 years. Majority of the patients were Brahmins (55%), while 16% and 8% were Kshetris and Newars respectively. 1 patient (1%) was Muslim while the remaining 20% belonged to other indigenous ethnic groups.

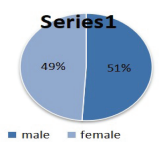

Fig 1. Gender Distribution

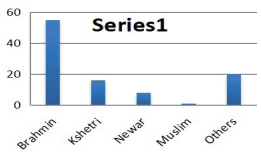

Fig 2. Ethnicity distribution

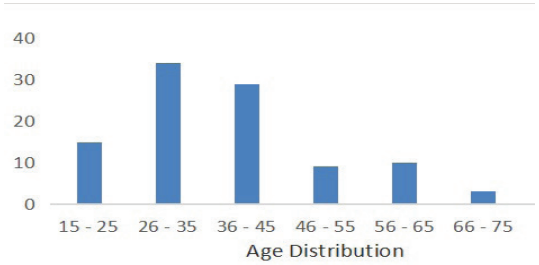

Fig 3. Age group

Extent and severity of the disease: Extent of the disease was evaluated with colonoscopy in all patients and biopsies were taken for histopathology. Of the 100 patients, 41% had E1, 43% had E2 and the remaining 21% had E3 disease. Clinically, 41 % of the patients had mild while 46% had moderate disease. Severe disease activity was found only in 12 % of the patients.

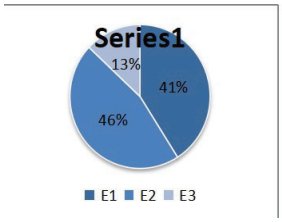

Fig.4 – Extent of Disease

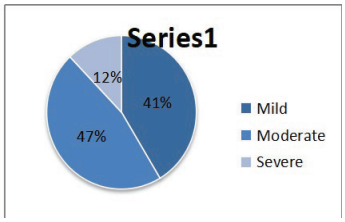

Fig.5–Severity of the disease

As shown in fig. 6, rectal bleeding (85%) was the most frequent presenting complaint followed by chronic diarrhea (70%). The other complaints were tenesmus (63%), urgency (61%), pain abdomen (44%), weight loss (14%), fever (7%) and constipation (4%). Extra intestinal manifestations (EIM) were found among 12% of patients. The most common EIM was peripheral arthralgia and arthritis followed by uveitis. No other EIMs were found.

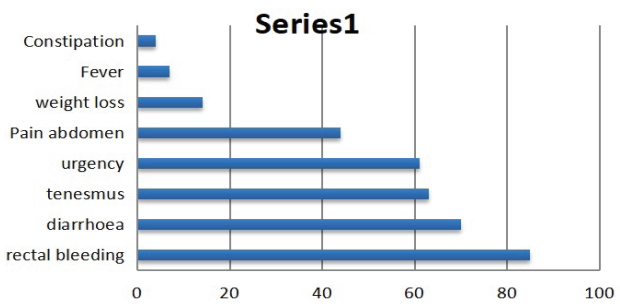

Fig 6. Symptom distribution

Discussion:

Studies from the west reveal a bimodal peak age for UC, with a first peak at 20–39 and a second smaller peak at the age of 60–79 years. 6,8, However, this second peak was not demonstrated in Asian epidemiological studies and this study demonstrated a similar finding with peak incidence at 26 to 35 years of age. Though earlier studies revealed the incidence of UC to be greater among males, recent studies show similar incidences between both the genders. 5,8 Our study revealed an almost similar incidence between both sexes with a slight male preponderance (1.04:1).

The pathogenesis of UC is partially genetically determined. This fractionally explains the wide variation of UC across various ethnic groups. In Israel, UC is predominantly found among the Ashkenazi Jews. Studies from Singapore and Malaysia have shown that significant racial variations exist with UC being most common among the Indians and Chinese and least in the Malayan group. 5,8, Nepal is a country with a large ethnic diversity. Our study showed that the majority of patients were Brahmins (55%) and Kshetris (16%). One reason could be due to them owing the majority of the population group. Their Indo-European ancestry could also contribute to the explanation.

In India, as per the Indian Society of Gastroenterology (ISG) task force 2012, most patients (42.8%) had extensive colitis followed by distal colitis in 38.8% and proctitis in 18.3%. However, most Asian countries, Australia and the west report a higher incidence of proctitis, superseded by left sided colitis and pancolitis. 8,11, , In China, the difference appears to be even more marked. In an analysis of 10,218 patients with UC, disease extent of 70.20% proctitis, 22.50% left sided colitis and 7.30% pancolitis were noted. Our study showed a distribution similar to those in other south East Asian countries and Australia. The clinical severity of the disease was in tract with the extent, with mild form being the most common followed by moderate and severe disease.
The symptom distribution is similar to those reported from other parts of the world albeit with a lower rate of EIM. 14,17, , , Studies have reported varying incidences of EMI in these patients with 25% of patients having an EIM during their lifetime. In India, The ISG IBD Task force reported that 29.6% of patients had at least one EIM.14 A more recent study found EMI in 40% among 58 patients with UC. This was much higher compared to other countries like China, South East Asia and Australia where the incidences of EIM were 6.1%, 13% and 3.6% respectively.7,15,17 The incidence of EIM among our patients was 12%. The most common EIM was peripheral arthritis, followed by uveitis. We did not document any sacroiliitis, dermatological involvement or Primary Sclerosing Cholangitis (PSC) among our patients.

Conclusion

Nepal is a country with wide geographical, ethnic and economic diversity. Urbanization is increasing along with changes in people's lifestyle and the access to health care seems to be on the rise. All these are likely to affect the epidemiology and disease phenotype of UC. This study is an attempt to characterize the demographics and clinical features of UC among Nepalese patients visiting a tertiary care center. Given the small sample size, it may not be generalized to the wider populace. Hence, larger population as well as hospital-based studies with longer follow-ups will be required to better understand the disease in the Nepalese population.

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