Original Research Article

Extra-intestinal manifestations of ulcerative colitis

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Abstract

Background: Inflammatory bowel diseases are considered as systemic diseases since they are often associated with extraintestinal manifestations. Ulcerative colitis manifestation can affect any organ system. Studies on extraintestinal involvement of UC are very few in India. In view of this context, the present study was undertaken to extraintestinal manifestations UC in a tertiary care medical center. **Material and Methods:** The present study was conducted in the Department of General Medicine on 35 patients over a period of two years. All cases were analyzed by clinical symptoms, laboratory investigations, colonoscopic findings and histopathological features. Clinical severity was assessed by Truewitt Love's criteria and endoscopic grading (Baron's criteria) was performed. **Results:** The peak incidence of UC was seen in 20-40 years age group. Males were more affected than females. Diarrhea and blood in stools were the most common presenting complaint. Extraintestinal manifestations were seen in 25.71% of patients. Arthritis was most common extra intestinal manifestation. Majority of patients with extraintestinal manifestations had moderate disease severity. **Conclusion:** There is a need of increased awareness of the high incidence of extraintestinal manifestations in UC patients for prevention, early diagnosis, and adequate treatment of these pathological conditions.

Key Words: Inflammatory bowel disease, Ulcerative colitis, extra intestinal manifestations, arthritis, severity.

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INTRODUCTION

Inflammatory bowel disease (IBD) consists predominantly of ulcerative colitis (UC) and Crohn's disease (CD), which are clinically distinguished by intestinal localization, local features of inflammation, a profile of complications, and familial aggregation.[1] UC is characterized by recurring episodes of continuous inflammation limited to the mucosal layer of the colon and rectum.[2] They are associated with increased morbidity and decrease in quality of life. They pursue a protracted relapsing and remitting course usually extending over years. These diseases can lead to substantially higher direct and indirect health care costs. The incidence and prevalence of UC varies widely between different populations and from country to country. The two population-based studies showed prevalence of UC in India as 42.8 and 44.3 per 1 lakh population. The incidence of UC in India is 6.02 per 1 lakh population. That showed UC has emerged in India over last two decades from 'rare disease' to a 'frequently seen disease'.[3,4] The extraintestinal manifestations of UC can affect any organ system.Skin and hepatobiliary systems are more commonly involved, whereas, cardiovascular and renal systems are less commonly involved.[5]In fact, development of one extraintestinal manifestation can increase the risk of developing additional complications.[6]In western studied, approximately 42% of UC patients were found to have extraintestinal complications.[7]Studies on extraintestinal involvement of UC are very few in India. In view of this

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context, the present study was undertaken to extraintestinal manifestations UC in a tertiary care medical center.

MATERIAL AND METHODS

The present study was conducted in the Department of General Medicine on 35 patients of UC admitted in KLES Dr. Prabhakar Kore Hospital and Medical Research Centre, Belgaum during the period of January 2008 to December 2008.

All patients with history suggestive of ulcerative colitis (for example abdominal pain and bloody diarrhea) were subjected to colonoscopy and biopsy. In proved cases, clinical profile, thorough history, examination and relevant investigations was studied.

Inclusion Criteria

1. Colonoscopy and biopsy proven cases of ulcerative colitis over a period of one year.

Exclusion Criteria

1. Crohn's disease
2. Indeterminate Colitis
3. Patients with infections, ischemia and malignant Conditions
4. Drug induced colitis

All routine laboratory investigations were carried out on each patient including stool culture/sensitivity and occult blood. Colonoscopy and Biopsy was done. Special investigations were done as required. All cases were analysed by age, gender, clinical symptoms, laboratory investigations, colonoscopic findings and histopathological features. Clinical severity was assessed by Truewitt Love's criteria and endoscopic grading (Baron's criteria) was performed. The study was conducted on basis of clinical symptoms and signs such as duration of symptom, diarrhea, bloody stools, constipation, weight loss, fever and abdominal pain. Extra intestinal (EI) symptoms like, joint pain, oral ulceration and history of smoking and alcohol intake.

RESULTS

The peak incidence in age group of 21 to 40 years. The youngest patient was 16 years and oldest was 79 years. The mean age of the patients was 38.12 ± 13.12 years. Male: Female ratio was 1.91:1, revealing higher male predominance. Diarrhea (100%) with passage of blood in stools (97.14%) and pain in abdomen (68.57%) were common presenting complaints. Other symptoms like weight loss (25.71%), nausea and vomiting (17.14%) and constipation were less frequently encountered. The mean symptom duration was 10.9 ± 11 months. Pallor (45.71%) was most common finding. Clubbing, tenderness in lower abdomen, hepatomegaly and icterus were present in decreasing order. In present study, 9 (25.71%) patients had extra intestine manifestations. Peripheral arthritis was found in 11.42% patients. Out of them three had pauciarticular peripheral arthritis and one had spondylitis with sacroilietis. 8.57% of patients presented with skin manifestations. Out of them one had psoriasis, one had pyoderma gangrenosum and one had erythmatous rashes. Oral ulcers (8.57%), fatty liver (5.71%), eye lesion (5.71%) and CVT (2.86%) were also seen in our patients (Table 1).

Table 1: Extraintestinal manifestations in UC patients

Extraintestinal manifestation	Number of patients	Percentage
Arthritis	4	11.42%
Skin lesions	3	8.57%
Oral Ulceration	3	8.57%
Eye lesion	2	5.71%
Fatty liver	2	5.71%
CVT	1	2.86%

Majority of patients with extra intestine manifestations had moderate disease activity, but correlation with clinical severity was not statistically significant.

Table 2: Correlation between extraintestinal manifestations and clinical severity of the disease (Truelove Witts criteria)

Symptom	Mild	Moderate	Severe
Arthritis	0	3	1
Skin lesions	1	2	0
Oral Ulceration	0	2	1
Eye lesion	0	2	0
Fatty liver	0	2	0
CVT	1	0	0

(x^2=11.5341; p=0.3174; NS)

DISCUSSION

Extraintestinal IBD-related immune disease can be classified into two major groups: the first one includes reactive manifestations often associated with intestinal inflammatory activity. Therefore,they reflect a pathogenic mechanism common with intestinal disease (arthritis, erythema nodosum, pyoderma gangrenosum, aphthous stomatitis, iritis/uveitis).The second one includes many autoimmune diseases independent of the bowel disease that reflect only a major susceptibility to autoimmunity, such as ankylosing spondilitis, primary biliary cirrhosis, alopecia areata and thyroid autoimmune disease.[8,9] The peak incidence of disease in present study was seen in 20 to 40 years age groupw hich is correlating with many Indian studies.[10-12]. In a country-wide survey of IBD from India, the mean age at diagnosis of UC was 38.5years.[10]We observed unimodal presentation of disease in contrast to western study and Indian study, which showed a second peak in 6th to 7th decade. We had only one patient above 60 years of age. However, various

other Indian studies have shown a unimodal peak.[10-12]A review study by Kedia S and Ahuja V also observed that the bimodal peak as observed in the West is not observed in India and other Asian countries.[13] In present study, out of 35 UC cases, there were 23 males (65.17%) and 12 females (34.29%). There was a male predominance in our study withmale: female ratio of 1.91:1, which was in concordance with other studies.[10-12]In fact, all studies from India consistently indicate that UC is associated with a slight male preponderance. This could be attributed to either low prevalence of disease or representation of socio-referral bias, where women and girls are underrepresented in receiving medical attention. On physical examination commonest finding was pallor in 45.71% (16). Other findings like clubbing (17.15%), tenderness in lower abdomen (14.29%), hepatomegaly (8.57%) and icterus (2.86%) were also present. The mean duration of symptoms in our study was 10.9 months which is comparable to most recent studies. Diarrhea (100%), passage of blood in stools (97.14%) and pain in abdomen (68.57%) were major presenting complaints. Constitutional symptoms like fever and weight loss were found in 28.57% and 25.71% of patients. In our study, one patient had constipation and hematochezia and one patient tenesmus and hematochezia. Both of them were found to have limited colonic involvement either in form of proctitis or proctosigmioiditis. In our study, extraintestinal manifestations were seen in 9 (25.71%) patients. In a study at All India Institute of Medical Sciences, New Delhi, India, the overall prevalence of any EIM in UC was 33.2%.[14]Except for the study by Pokharna *et al*.[11] which reported a lower prevalence of extra-intestinal manifestations in Indian patients as compared to those from the West, other studies indicate that the overall prevalence of EIMs in Indian patients is comparable.[10-12,17] The most common was peripheral arthritis in 4 patients (11.42%) which is comparable with western and Indian studies. Out of four, three had pauciarticular peripheral arthritis and 1 patient had spondylitis and sacroileitis. Inflammatory arthropathies are the most common extraintestinal manifestations in IBD patients with a prevalence ranging between 7% and 25%.[18-20] Three patients (8.57%) had skin lesions. One patient presented with Pyoderma gangrenosum, which developed nine months after bowel symptoms and had moderate clinical disease activity. Pyoderma gangrenosum is a very debilitating ulcerating chronic skin disorder occurring in about 1-2% of IBD patients. It occurs often on the extensor surface of the legs, particularly in coincidence with exacerbation of intestinal disease and in association with other extraintestinal manifestations (arthritis and erythema nodosum).[21,22] Another patient had history of onset of psoriasis 10 years prior to developing bowel symptoms and third one had erythematous rashes in which there was severe disease. Cutaneous manifestations of IBD are relatively common. Skin lesions can be classified into three principal classes: granulomatous, reactive, and secondary to nutritional deficiency.The incidence varies from about 10% at the time of IBD diagnosis to more than 20% in the course of the disease.[23] Ocular manifestations occur in about 10% of IBD patients. They can be immune-related (episcleritis, scleritis, uveitis, corneal disease) or related to drug exposure (cataract, glaucoma). Eye lesions in form of scleritis was seen in 2 (5.71%) patients.

Oral ulceration was seen in 3 patients (8.57%). Fatty liver in 2 (5.71%) and CVT (left transverse and sigmoid cortical venous sinus thrombosis) was seen in 1 patient (2.86%). Patients with IBD have a well-known increased risk (threefold higher than in controls) of thromboembolism, which is an important cause of morbidity and mortality.[24]It was observed that majority of patients with extra intestinal manifestations had moderate disease activity but was statistically not significant. In conclusion, there is a need of increased awareness of the high incidence of extraintestinal manifestations in UC patients for prevention, early diagnosis, and adequate treatment of these pathological conditions.

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