Original Article

Extra-intestinal Manifestations of Ulcerative Colitis in Omani Population: A Study of 100 Cases

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ABSTRACT

OBJECT: To identify the extra intestinal manifestations of Ulcerative Colitis in Omani population.
STUDY DESIGN: Observational study.
PLACE AND DURATION OF STUDY: Sultan Qaboos University Hospital, Oman from January, 2002 to January, 2006.
PATIENTS AND METHODS: Inclusion Criteria: All patients seen in Gastroenterology out patient's clinic with bleeding per rectum and diagnosis of ulcerative colitis by colonoscopy and subsequent confirmation by biopsy.
Exclusion Criteria: All patients with other systemic illness.
RESULTS: Total 100 Patients were included in the study, among them 61 were males. Extra intestinal manifestations were observed in 6 males and 5 females. Among 6 male patients 2 had more than one complication while 4 had only one complication. Among 5 female patients 2 had more than one, while 3 had only one complication.
CONCLUSION: It is thus concluded that incidences and severity of extra intestinal manifestation is much less in the Omani population as compared to the Western population.

KEY WORDS: Ulcerative Colitis, Colonoscopy, Extra intestinal manifestations.

INTRODUCTION

Ulcerative colitis (UC) is a chronic inflammatory condition of unknown aetiology, mainly involving the large bowel. It is characterized by the prescence of mucus and bloody diarrhea[1, 2]. Few predisposing factors such as genetic, environmental, familial and altered host immune responses are linked to the ulcerative colitis[3-5]. The disease almost always invariably involves the rectum and may extend proximally in a continuous fashion to involve other portion of colon. The world wide incidence of ulcerative colitis is 6-15 per 100,000 annually with prevalence of 80-150 per 100,000 annually[6]. In other studies the incidence range from 2.2 to 14.3 cases per 100,000 and prevalence range from 37 to 246 per 100,000 annually[7]. Ulcerative colitis is more common in males with male to female ratio of 1.2-1. Mean age was 34 year[6, 8, 9]. Clinical presentation of ulcerative colitis is highly variable, bloody diarrhea is the hallmark. For therapeutic and prognostic purposes, it is useful to classify these presentations as mild, moderate and severe disease by using different variables[10.] Table no: 1[(11)]. Ulcerative colitis is associated with number of extra intestinal manifestations[12-14], most commonly involving the skin and mouth (aphthous ulcers, erythema nodosum[15], pyoderma gangrenosum)[6,16], musculoskeletal (arthralgia, type1 pauciarticular arthropathy, typeII

polyarticular arthropathy, ankylosing spondylitis[6,17,18], ocular (conjunctivitis, episcleritis[19], uveitis[20]), liver and biliary tree (scloresing cholangitis[21], fatty liver, autoimmune hepatitis), arterial and venous thromboembolism[6,22-24]. Diagnosis of ulcerative colitis is usually suspected by the characterstic history and established with lower G.I. endoscopic findings and confirmation by biopsy.[25] The treatment of ulcerative colitis is based upon the severity and extent of the disease. The purpose of our study is to determine the frequency of extra intestinal manifestation of UC and compare the frequency and severity with international literature.

PATIENTS AND METHODS

This observational study was carried out at Sultan Qaboos University Hospital, Oman, which is a 250-bedded hospital with all modern facilities. The subject comprised adult patients who were diagnosed to have UC during a period of January, 2002 to January, 2005 and were followed up till December, 2006. The diagnosis of UC was based on clinical features (bleeding per rectum), colonoscopy & histological findings. All patients included in the study has to undergo complete blood count, liver function test, erythrocyte sedimentation rate, C-reactive protein, serum protein, albumin globulin-ratio, urea, creatinine, electrolytes and

Chest X-ray. All these investigations were repeated as and when required. Any patient with suspicion of ocular involvement was referred to ophthalmologist and was treated and followed by him in edition to regular GI clinic. Any patients showing cardiac or pulmonary manifestations were planned for schedule echocardiography and pulmonary function test. The histopathological severity of mucosal inflammation was graded according to international standard criteria. Patients with others systemic illness like extensive cardiac or pulmonary disease, hepatitis-B and C, autoimmune diseases like systemic lupus erythematosis, rheumatoid arthritis, systemic sclerosis, autoimmune hepatitis were excluded from the analysis. Other autoimmune diseases were excluded due to the fact that in any patients with other immunological illness, it is difficult to differentiate between autoimmune diseases and extra intestinal manifestation of UC.

RESULTS

During the period of three years (January, 2002 to January, 2005) total 100 patients were enrolled and followed up till December, 2006. Male to female ratio was 1.5:1. The mean age of our patients was 34 year (range 21 to 41). Regarding severity of mucosal inflammation among 61 male patients, 17 had severe, 14 had moderate and 30 had mild disease. In females, 4 had severe, 5 had moderate and 20 had mild disease **(Table II)**. The extent of colonic involvement was observed in colonoscopies findings as in **Table III**. Extra intestinal manifestations were found in total 11 patients (11%), among them 6 were male and 5 were female **(Graph I)**. One patient in each sex group had all extra intestinal manifestation simultaneously. Two patients had two of them and rest had one separately. Extra intestinal manifestations were more common in patients with severe illness.

TABLE I:
ASSESSMENT OF DISEASE ACTIVITY IN ULCERATIVE COLITIS

Parameters	Mild	Moderate	Severe
Stool / day	< 4	4-6	> 6
Temperature F^O	Normal	99- 100	> 100
Pulse beats / min	< 90	90- 100	> 100
Weight loss %	None	1- 10	> 10
E.S.R (lst hr)	< 20	20-30	> 30
Hematocrit %	Normal	30- 40	> 40
Albumin (g / dl)	Normal	3-3.5	< 3

TABLE II:
SEVERITY OF THE DISEASE

	Male	Female
Mild	30 (49%)	20 (51%)
Moderate	14 (23%)	5 (12%)
Severe	17 (28%)	4 (10%)

TABLE III:
EXTENT OF COLONIC INVOLVEMENT

	Male	Female
Ulcerative proctitis	31 (51%)	16 (41%)
Proctosigmoiditis	15 (25%)	11 (28%)
Extensive colitis	11 (18%)	9 (23%)
Pancolitis	4 (7%)	3 (8%)

GRAPH I:
EXTRA INTESTINAL MANIFESTATION
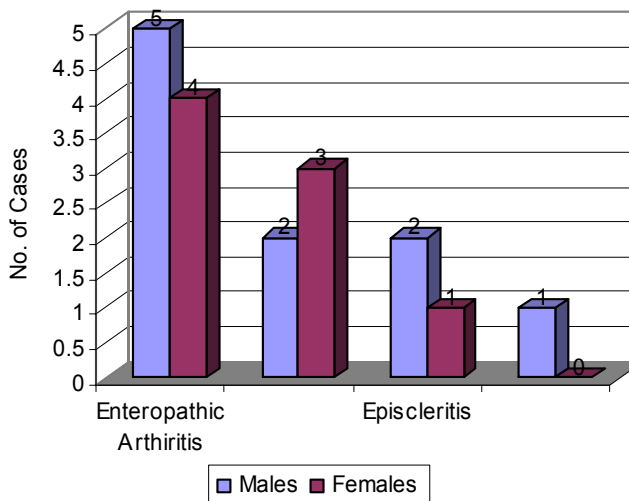
DISCUSSION

Until recently it was generally believed that UC was rarely seen in under developed countries including Middle East.[26,27] The prevalence and incidence of the disease is not known in this part of world, however estimated annual frequency of newly diagnosed patients in one study is 0.01% to 6%[28,29] while prevalence and incidence comparably high in western population[30]. UC is a disease of young with majority occurring in the third to fourth decade of life. In Western population the disease diagnosed relatively in younger age.[31,32] The contributory factor of this apparent difference might be related to a possible delay in the presentation of patients to health care facilities. A study from Riyadh indicated that about half of the

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patients did not seek medical care until six months after the onset of the symptoms.[27] UC is considered to be more common among females especially in Western population, however equal sex distribution had been reported in some reports.[32] In contrast to this observation the male to female ratio in our study is 1.5:1. Possible explanation for this is that in this part of the world few females attend hospitals for rectal bleeding due to social and cultural reasons.[33] Extra intestinal manifestations are frequent in patients with UC, it can involve almost any system and influence morbidity and mortality, and these are mostly observed in patients with severe disease. Approximately 25% of patients with Inflammatory Bowel Disease (IBD) have a combination of extra intestinal manifestations, as the development of one extra intestinal manifestation increases the risk of developing other extra intestinal manifestation.[11] However EIM are less commonly observed in Arab's population.[27,28] Appearance of erythema nodosum usually parallels to intestinal disease activity. In our study it was observed in 6% of patients as compared to Western population in whom it is 15%. Pyoderma gangrenosum occurs in 5 % of cases in western studies[6,16], while no single case was observed in our study. Episcleritis and uveitis are the most frequent ocular manifestation of IBD. Episcleritis occurs in 2% to 5 % of patients in western studies[19] while in our study it was present in 3% of patients. Uveitis is less common than episcleritis occurring in 0.5% to 3% of patients in western studies[20]. While no single patient was detected in our study. Diseases of the liver and biliary tract are common extra intestinal manifestation of IBD[34-37]. Sclerosing cholangitis is one of the most common hepatobiliary manifestations. It is estimated that approximately 5% of patients[21] developed sclerosing cholangitis and that ulcerative colitis present in upto 90 percent of patients of sclerosing cholangitis. In our study we observed 1 patient having this complication. Musculoskeletal manifestations are more commonly reported in western and Asian literature; [6,17,18,34-37] while in our study entropathic arthritis was observed in 9 patients confirming that it is equally common in both populations.

CONCLUSION

UC is relatively uncommon disease in our area of the world as compared to Western population. Extra intestinal manifestation present in UC can be missed if the proper prevalence and incidence is not in the mind of treating physician, more over they can lead to drastic complication if treatment is delayed. In our study we tried to locate these manifestations as early as possible. In the follow up of our patients for the duration of 5 years, we've noticed comparatively low frequency and less severity of these complications and hence we want to share the experience with our colleagues.

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