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PREVALENCE OF EXTRAINTESTINAL MANIFESTATIONS AMONG PATIENTS WITH ULCERATIVE COLITIS

Noman Khan[1], Wajid Iqbal[2*], Younas Ahmad[3], Shah Nawaz Khatti[4], Asma Abdul Razzak[5], Vineesha[6]

[1]Senior Registrar, Department of Gastroenterology, Prime Teaching Hospital, Peshawar - Pakistan
[2*]Senior Registrar Department of Gastroenterology, Timergara Teaching Hospital, Dir Lower - Pakistan
[3]Assistant Professor, Department of Gastroenterology, Jinnah Medical College & Teaching Hospital, Peshawar - Pakistan
[4]Assistant Professor, General Surgery, Liaquat University of Medical and Health Sciences, Jamshoro - Pakistan
[5]Assistant Professor Gastroenterology, Medicare Cardiac and General Hospital (Jinnah Medical Dental College), Karachi - Pakistan
[6]Liaquat National Hospital and Medical College, Karachi - Pakistan

Corresponding author: Wajid Iqbal
*Email: drwajid1112@gmail.com

ABSTRACT:
Objective: Prevalence of extraintestinal manifestations among patients with ulcerative colitis.
Methodology: We initiated a cross sectional study on 180 patients presenting with ulcerative colitis having age 18 to 65 years of either gender. Prevalence of EIMs and its predictors were assessed.
Results: The mean age was 40.77±14.20 years. Prevalence of EIMs was 84 (46.7%). Nineteen (22.6%) EIM patients had pancolitis, Thirty six (42.9%) had arthritis, and 23 (27.4%) had colectomy. Predictors such pancolitis, arthritis, and colectomy were connected to extraintestinal symptoms.
Conclusion: Prevalence of extraintestinal manifestations among patients with ulcerative colitis was 84 (46.7%)

Keywords: Ulcerative colitis, Extraintestinal manifestations, predictors

INTRODUCTION:

Ulcerative Colitis (UC) is a chronic inflammatory bowel disease (IBD) that mainly involves inflammation of the colon and rectum [1]. It is recognized for its diverse and varied characteristics. In addition to affecting the gastrointestinal tract, UC can also appear in different organs outside of the intestines, leading to a range of issues that go beyond the boundaries of the digestive system [2, 3]. The presence of extraintestinal manifestations (EIMs) adds to the intricacy of UC, creating further difficulties in diagnosing, treating, and caring for patients [4].

Although UC is primarily characterized as an inflammatory condition affecting the gastrointestinal tract, it is now clear that the disease's impact extends beyond the intestinal lining [5]. Extraintestinal symptoms have the potential to affect almost every organ system, including the skin, muscles and bones, eyes, liver and gallbladder, kidneys, and lungs [6, 7]. The interdependence of various expressions

highlights the systemic characteristic of UC and the necessity for a comprehensive approach in comprehending and handling the illness [8].

Based on their association with UC activity, EIMs can be divided into two groups: those that directly correlate with intestinal activity and those that have an independent course from the underlying IBD activity, potentially indicating an autoimmune component. Other manifestations like pyoderma gangrenosum may or may not be linked to IBD activity [9, 10]. The underlying biological processes responsible for EIMs remain unclear; nevertheless, several explanations have been suggested, including hereditary predisposition, supported by the high rate of occurrence among siblings and close relatives [11].

It is widely recognized that the reoccurrence of the same EIMs is frequent, and patients who have one EIM are at a heightened chance of having another [12]. An affirmative correlation between arthritis and dermatologic and ophthalmologic complications has been noted, indicating a same pathogenic mechanism [13].

An essential part of managing the complex chronic inflammatory conditions of ulcerative colitis is to comprehend and tackle the extraintestinal symptoms in patients. The acknowledgement of various presentations in different bodily systems emphasizes the necessity for a cooperative and multidisciplinary approach to deliver the best possible treatment for people with UC. As research progresses, healthcare professionals are gaining a deeper understanding of the complex connections between intestinal and extraintestinal symptoms. This knowledge allows them to customize treatment approaches, enhance patient outcomes, and improve the overall quality of life for individuals with ulcerative colitis. The rationale of this study is to determine the prevalence of extraintestinal manifestations among patients with ulcerative colitis.

MATERIAL AND METHODS:

An ethical approval was obtained to commence a cross-sectional study at the Department of Gastroenterology Prime Teaching Hospital, Peshawar in the duration from May 2023 to November 2023. We have chosen 180 individuals who have been diagnosed with ulcerative colitis. Patients between the ages of 18 and 65, of any gender, were chosen.

Patients diagnosed with UC based on established clinical, radiographic, endoscopic, and histological criteria were included, regardless of their age. The demographic, clinical, and endoscopic results were entered in pre designed pro-forma. The existence or absence of EIMs was confirmed by reviewing clinical, radiographic, and laboratory evidence.

The primary focus of this study was to analyze the occurrence of EIMs (both overall and individual) as the main result. Extraintestinal manifestations (EIMs) were defined as any symptoms or conditions associated with UC, occurring either throughout the course of the disease or prior to the diagnosis of UC. We examined the factors that can forecast the occurrence of extraintestinal manifestations (EIMs), such as arthritis, pancolitis, and a previous colectomy. All the data was analyzed using SPSS 20.

RESULTS:

We selected 180 patients presenting with UC for this study. The mean age was 40.77±14.20 years. The frequency of male patients in our study was 123 (68.3%) and the frequency of female patients was 57 (31.7%). Regarding the comorbidities we observed that 39 (21.7%) patients were suffering from diabetes. Hypertension was seen in 69 (38.3%) patients. Smoking status revealed that around 48 (26.7%) patients were smokers. The overall frequency of pancolitis was 29 (16.1%), arthritis 56 (31.1%) while history of colectomy 31 (17.2%).

The prevalence of EIMs in our study was 84 (46.7%). In patients with EIMs, pancolitis was seen in 19 (22.6%) patients, arthritis in 36 (42.9%) patients and history of colectomy in 23 (27.4%) patients. All the predictors such as pancolitis, arthritis and history of colectomy were notably linked with extraintestinal manifestations.

Figure 1 Gender distribution

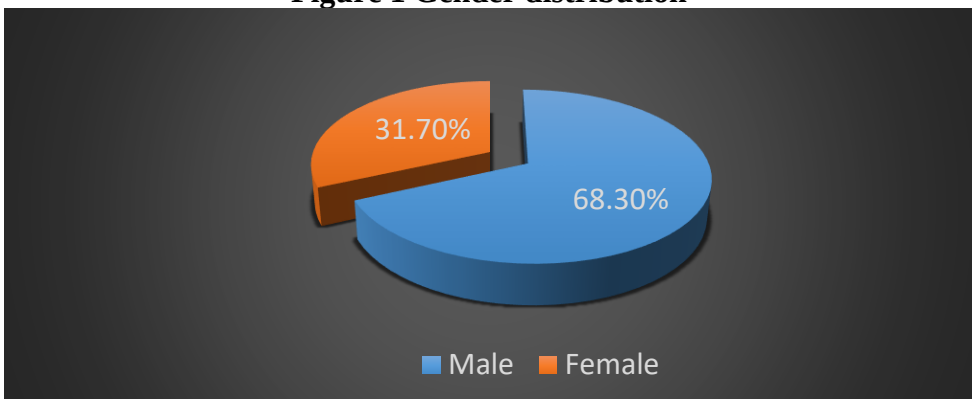

Table 1Prevalence of extraintestinal manifestations

Extraintestinal manifestations	Frequency	Percent
Yes	84	46.7
No	96	53.3
Total	180	100.0

Table 2Association of predictors with EIMs

Predictors		Extraintestinal manifestations				
		Yes		No		P value
		N	%	N	%	
Pancolitis	Yes	19	22.6%	10	10.4%	0.02
	No	65	77.4%	86	89.6%	
Arthritis	Yes	36	42.9%	20	20.8%	0.001
	No	48	57.1%	76	79.2%	
History of colectomy	Yes	23	27.4%	8	8.3%	0.001
	No	61	72.6%	88	91.7%	

DISCUSSION:

Ulcerative colitis (UC) is a persistent inflammatory condition that predominantly targets the colon and rectum. It is characterized by alternating periods of improvement and worsening. Although the gastrointestinal symptoms of UC are well-documented, there is an increasing acknowledgment of extraintestinal manifestations (EIMs) that can have a substantial influence on the overall health and quality of life of those affected[12]. Extraintestinal manifestations (EIMs) in ulcerative colitis (UC) encompass a wide range of problems that go beyond the gastrointestinal tract and affect multiple organ systems. Comprehending and identifying these additional manifestations outside the intestines is essential for providing comprehensive care to patients, since they may pose distinct difficulties in terms of diagnosis and treatment.[13]

UC can be accompanied by other extraintestinal symptoms that might affect the joints, skin, eyes, and other organs. Articular symptoms are common in patients with ulcerative colitis, with up to 30% of individuals suffering inflammatory arthritis. This might manifest as peripheral arthritis or axial involvement resembling ankylosing spondylitis. Additionally, dermatological problems, such as pyoderma gangrenosum and erythema nodosum, are commonly encountered. Up to 10% of patients with ulcerative colitis may experience ocular symptoms, such as uveitis and episcleritis. Furthermore, UC is linked to hepatobiliary consequences, specifically primary sclerosing cholangitis (PSC), which highlights the importance of a multidisciplinary approach to patient care[14].

The precise pathophysiology responsible for extraintestinal signs in UC is not fully known, but there is evidence indicating a common immunological foundation. Imbalance in the functioning of the immune system, namely the interaction between pro-inflammatory cytokines and hereditary variables, could potentially lead to the occurrence of both gastrointestinal and extraintestinal problems.

Identifying these common pathways could offer valuable information on possible treatment targets for effectively controlling both the intestinal and extraintestinal manifestations of the disease.[15]
The existence of extraintestinal symptoms in UC not only increases the intricacy of the clinical progression but also presents difficulties in terms of diagnosis and treatment. Medical professionals must remain vigilant for extraintestinal manifestations (EIMs), as they may occur before or at the same time as gastrointestinal symptoms.[16] Prompt recognition is essential for initiating suitable therapies, as the treatment of extraintestinal symptoms frequently necessitates a cooperative endeavor among gastroenterologists, rheumatologists, dermatologists, and other experts. Moreover, the utilization of immunosuppressive drugs and biologics, which are frequently used in the management of UC, can impact the progression of extraintestinal symptoms. Therefore, a careful and personalized strategy is required.[17]
We conducted our study on 180 patients presenting with UC, we estimated the prevalence of EIMs in these patients. Our patients were in the age group of 18 to 65 years and most of them were male patients. Comorbidities seen in our study were diabetes, hypertension and smoking.
The prevalence of EIMs in our study was 84 (46.7%), similar findings have been reported by a study which showed the prevalence of EIMs 55.8%.[18] Another study reported the prevalence of EIMs 40%.[19]
We observed that the risk predictors associated with EIMs in our study were pancolitis, arthritis and history of colectomy. These predictors were notably associated with EIMs in UC patients. The aforementioned reported that in their multivariate analysis they found pancolitis and history of colectomy notable predictors of EIMs in UC patienets[18].

CONCLUSION:

From our study we conclude that the prevalence of extraintestinal manifestations among patients with ulcerative colitis was 84 (46.7%). Notable predictors for EIMs were pancolitis, arthritis and history of colectomy.

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