

A Physiological Study of Inflammatory Bowel Disease; Manifestation, Prevalence and Management at PIMS Hospital Islamabad

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ABSTRACT

As we know that inflammatory bowel disease is polygenetic disease and comprises of Crohn's Disease & Ulcerative Colitis. From past many decades, the frequency of bowel disease has been increasing in Asian countries. The main cause of this disease is Biochemical and Physiological alteration and also anxiety and stress play a key role in the incidence of this disease. For the current study total 100 patients were selected from Pakistan Institute of Medical Sciences (PIMS) Islamabad for the duration of six month and SPSS software was used for Data Analysis. Among 100 patients, 54% were male and 46% were females. 54% patients were in the age group 15-30, 26% in 31-45 & 20% in the 46-60 year age group. The most common oral presentation was aphthous ulcer 46.4%, Lip swelling with vertical fissures was seen in 15.7%, mucogingivitis in 26.8% and cobble stoning in 12.1 % cases. 41% patients taking corticosteroid, 32% amino salicylates and 33% antibiotics. 83% of these patients were taking antibiotics intermittently. The high prevalence ratio is because of Alteration in Envirmental condition developing countries such as with industrialization dietary habits, increased drugs intake and increasing stress.

Keywords: Inflammatory bowel disease, Crohn's disease, Prevalence

INTRODUCTION

Inflammatory bowel disease (IBD) results from complicated interaction of environmental, genetic and immune regulatory components. It comprises of 2 primary constituents; Crohn's Disease (CD) & Ulcerative Colitis (UC). Caucasians, Ashkenazic Jews, northern and industrialized countries are at risk populations (1). IBD is polygenetic disease and population based studies have described well established link between NOD2 variants and CD. (2).The incidence of UC has increased in Western countries after the Second World War era and it is increasing in (previously) low- incidence parts of globe i.e. Asia, East European countries and developing countries. CD incidence is <1 per 100,000 (but increasing) in Asia and South America (3).Regardless of underlying genetic factor, nonfunctional mucosal immune response to commensal bacteria in the IBD pathogenesis is the emerging debate. Possible triggering factor is chronic inflammatory response initiated by infection or disrupted mucosal barrier. Infiltration of neutrophils and macrophages is followed by cytokines & chemokines release. These exacerbate dysfunctional immune response and TH1 or TH2 cells are activated in gut mucosa (4). IBD occurs in genetically prone subjects by interaction between genes and environmental factors 5–10% of cases are familial while rests are sporadic cases (5).The new idea of psycho neuro immunology involvement in chronic stress and in acute experimental stress can disturb systemic immune and inflammatory function, and can increase disease process in humans with IBD. It is proved that the stress is able to initiate and reactivate gastrointestinal inflammation in animal models of colitis. There is a role of changed Physiology of the HPA axis and increased permeability of intestine. Psychological stress may speed up the disease process in IBD. IBD has broad spectrum of non-specific clinical features which can usually lead clinicians to misdiagnosis. Therefore, clinical presentation, histological, radiological, endoscopic and serological findings establish an accurate diagnosis. IBD patients having raised interleukin-6 (IL-6) level sin saliva, predict that gastrointestinal tract involvement is encroaching to oral cavity. Therefore, IL-6 level monitoring can be an initial diagnostic tool for monitoring disease activity and progression level (6). In 1972, Varley described the presentation of CD only as Oral findings without any intestinal features. The prevalence rate is between 20-50% in most publications (7). In most of the cases, intestinal lesions precede the oral involvement while oral lesions to be the first presenting sign are seen only in 5-10% cases. In CD oral lesions are more prevalent as compared to UC, more common in children than older, and with male predominance (8). On microscopy, IBD lesions show granulomatous changes. The most commonly involved parts of oral cavity: buccal mucosa, gingiva, lips, vestibular, and retromolar areas (9). There are four main types of lesions; cobblestoning, mucogngivitis, aphthous ulcers (aphthous stomatitis) & pyostomatitisvegetans (9) Aphthous stomatitis are oral ulcers which occur commonly in both UC and CD and it is a nonspecific finding indistinguishable from

other oral ulcers (10). Patient can present with abdominal pain, vomiting, diarrhea, weight loss and extra intestinal manifestations. Duration of these symptoms should be noted (11). Mood disorders are also present. Family history and history of cigarette smoking also should be asked (12) The main aims of our research was to identify the Prevalence rate of IBD among local population, frequency of different clinical features and rational therapy for management of IBD.

Material and Methods

For the current study total 100 patients were selected from Pakistan Institute of Medical Sciences (PIMS) Islamabad for the duration of six month. We included patients of both sexes (male and female) with age range of 15-60 years diagnosed with IBD. Data was collected on specially designed proformas. SPSS 20.0 was used to analyze the data and results were recorded.

Result

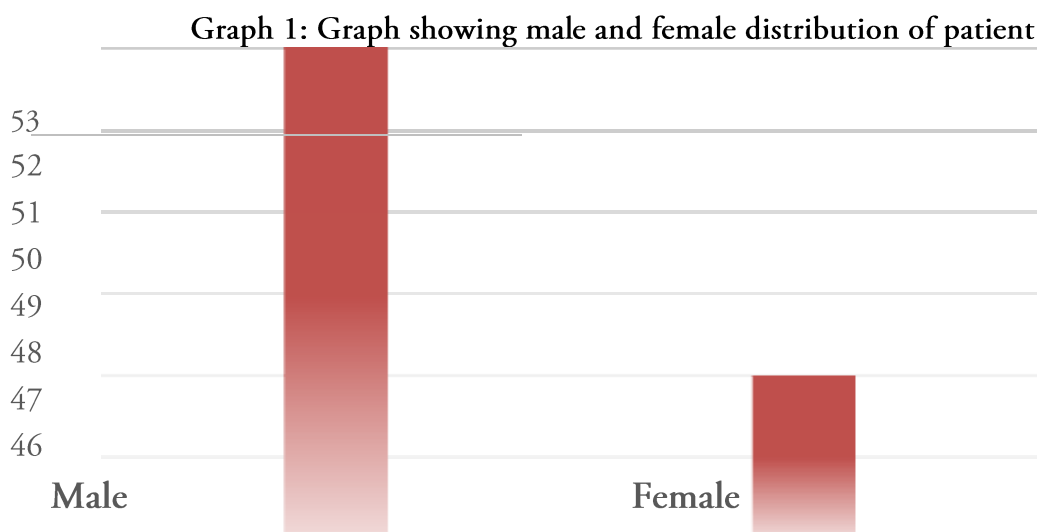


Table 1: Percentages of patients in different age groups. Among 50 patients, 52% were male and 48% were females. Patients were categorized into 3 age groups.

40% patients had positive family history by having any family member diagnosed with IBD while 60% had no family history. To observe the level of awareness about IBD in our community, its causes and treatment and to study the risk factors following data was obtained 36 % patients were aware of the term IBD and had understanding about their medical condition while 64 % had no knowledge what they were suffering from. Among the 50 patients who were suffering from IBD, 32% fully aware about the management of IBD and 68% had no idea about IBD management. 70% patients tried to take symptomatic treatment by self-medication only before being diagnosed IBD by a consultant. 70% patients had history of smoking while 30 % never smoked. Among all patients, 60% patient had positive hypertension history while 40% were not hypertensive as stress is the major factor triggering the IBD. 26% patients belonged to

high class and 45% patients belonged to lower socioeconomic status. Among all BD cases, 36% were diagnosed by colonoscopy, 44% by stool analysis and 20% by CT scan. Among the 50 patients of IBD whose data was collected, the medications used by the patients at the time of data collection were as follow: 40% patients taking corticosteroid, 30% amino salicylates and 30% antibiotics. 80 % of these patients were taking antibiotics intermittently.

Table 1: Different medications prescribed to the patients at the study time

Medication	Frequency	%age
Aminosaliclates	15	30
Corticosteroids	20	40
Antibiotics	15	30

Common presenting complaints at the time of presentations were as follow: 13% bloody stool, 16% severe abdominal pain, 2% fever, 11% vomiting, 35% diarrhea, 23% weight loss. Among 50 patients, only 18 presented with oral lesions at the time of study.

Table 2: Oral lesions frequency and Percentages among IBD patients

Oral lesions	Frequency	%age
Aphthous Ulcers	8	44.4
Lip swelling with vertical fissures	3	16.7
Mucogingivitis	5	27.8
Cobblestoning	2	11.1
Total	18	100

DISCUSSION

IBD affects both men and women and age of presentation is around 16- 25 years. Abnormal trigger of immune system, unhealthy diet plans and stress cumulatively aggravate and worsen the condition. (13).reported the mean age for CD is 20-30 years while for UC 30-40 years in West. CD in Asia is also diagnosed at early age than UC. In our study, the most common age group affected was 15-30 years for CD and 45-60 for UC. Halme et al, 2006 described family history in IBD cases in only 0.0–3.4% of IBD patients while Thia et al., 2008 reported familial history in 10–25% cases. In our study, 40 % patients had positive family history by having any family member diagnosed with IBD while 60% had no family history (14). Patient awareness is an important factor in the disease. Patients who don't respond to steroids for 2 weeks, they should be hospitalized. Patients should be on low residue diet to avoid diarrhea and other abdominal complaints (15). Remarks of many patients were found satisfactory for their treatment.. Besides treatment, there is need for awareness program. Patients should be educated about course of disease, possible responsible risk factors and effects of IBD on patients overall health.

CONCLUSION

The rising incidence is most likely associated with the changing environmental conditions in

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