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ORIGINAL ARTICLE

CHRONIC DIARRHOEA: AN ETIOLOGICAL AND EPIDEMIOLOGICAL STUDY AT A TERTIARY CARE HOSPITAL

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ABSTRACT: BACKGROUND: The etiology of malabsorption syndrome varies according to the geographical location and age of the patients. Scare data is available regarding the etiology of chronic diarrhoea in India. **AIMS AND OBJECTIVES:** To study etiology and epidemiological profile of chronic diarrhoea at a tertiary care center. **MATERIAL AND METHODS:** 100 patients of chronic diarrhoea were evaluated. **RESULTS:** Celiac sprue (54%) remains the commonest cause of chronic diarrhoea followed by Tropical sprue (32%). Crohn's disease, Intestinal tuberculosis, AIDS, Amyloidosis and Giardiasis. **CONCLUSION:** Celiac disease, Tropical sprue and Crohn's disease are common causes of chronic diarrhoea.
KEYWORDS: Diarrhea, Celiac disease.

INTRODUCTION: The etiology of malabsorption syndrome varies according to the geographical location and age of the patients.[1,2,3] While Celiac disease, Crohn's disease, cystic fibrosis, and intestinal lymphangiectasia are the frequent causes of malabsorption syndrome in the West, tropical sprue, parasitic infections, intestinal tuberculosis, and primary immunodeficiency syndromes have been reported to be the commonest causes of malabsorption syndrome in the developing countries like India.[4,5,6] With improvement in socioeconomic status, sanitary conditions and increasing use of antibiotics in recent years, the incidence of tropical sprue has declined.[7,8] On the other hand, celiac disease is increasingly recognized as an important cause of malabsorption both in children and adults.[9,10]

The aim of this study was to present the current spectrum of patients with mal absorption at a tertiary care center.

Inclusion Criteria: Diarrhea lasting for more than 4 weeks.

Exclusion Criteria: Patients of irritable bowel syndrome and lactose intolerance were excluded from the study.

MATERIAL AND METHODS: 100 patients with chronic diarrhea (Diarrhea lasting for more than 4 weeks) attending the Gastroenterology OPD at Mahatma Gandhi Hospital Jaipur between 1 April 2013 to 1 April 2015 were enrolled. Patients with lactose intolerance and irritable bowel syndrome were excluded from this study. Patients who received anti-parasitic drugs during the past 2 weeks and those showing non- compliance to follow up were also excluded. Demographic and clinical features including age, gender, duration of the disease, frequency of stools/day, consistency of stools, presence/absence of blood and mucus, abdominal pain, vomiting, and fever were

recorded. Hematological and biochemical investigations including liver function, HIV and thyroid profile were recorded. All patients underwent anti-tissue transglutaminase antibody (anti-tTG Ab) test. Serum immunoglobulin level (IgA, IgG, and IgM) estimation (using ELISA) was performed for patients who were suspected to have celiac disease, but had a negative serological test. UGI endoscopy and D2 biopsy was done if indicated.

RESULTS: Mean age was 30 years (8 to 82 years), Male: Female ratio was 1:1.8. The mean duration of diarrhoea was 90 (Range: 30 to180) days. Nutritional deficiency in form of pedal edema was present in 25% of patients and anaemia in 75 % of patients. BMI was low in most patients. 20% patients had history of receiving ATT empirically in the past. The most common cause of chronic diarrhoea was celiac disease (54%) followed by tropical sprue (32 %) Other causes of malabsorption syndrome in this study were Crohns disease (4%), Intestinal tuberculosis (4 %), AIDS (2%), Amyloidosis (2%) and giardiasis (2%). (Table 1) Scalloping of folds and both scalloping and attenuation of duodenal folds were more frequently present in patients with celiac disease as compared to tropical sprue. All patients with celiac disease had Marsh grade 3 villous atrophy. Crypt hyperplasia was higher in celiac disease than in tropical sprue. While increase in IELs were noted in all the biopsies; grade 3 IEL infiltrates was seen only in celiac disease.

DISCUSSION: In the present study, celiac disease was the most common cause of chronic diarrhoea followed by tropical sprue. A low index of suspicion and reliance on classic symptoms may have resulted in under-diagnosis of celiac disease in India until now. Sood et al.[11] reported a rising incidence of celiac disease in their hospitalized patients with celiac disease over the last 10 years. In recent years, celiac disease is being reported more frequently in India not only in children but also in adults. Tropical sprue is also a common cause of chronic diarrhoea. Its prevalence is high in south India and it is reported as most common cause of chronic diarrhoea in some studies. Improvement in sanitation may be associated with the decreasing prevalence of tropical sprue in India.[12,13] Crohn's disease is also a common cause of diarrhoea. In a study from south India, 20% of Crohn's disease patients presented with diarrhoea. It is possible that most cases of Crohn's disease in India are mistaken for intestinal tuberculosis and receive empirical anti tubercular therapy without any response. Amyloidosis and AIDS are rare cause of chronic diarrhoea and associated with very high mortality rate. Intestinal tuberculosis may also present with chronic diarrhoea. A good response to ATT is seen and most patients recover uneventfully.

CONCLUSION: In our study, Celiac disease remains the most common cause of chronic diarrhea followed by Tropical sprue. A high index of suspicion is required for diagnosing celiac sprue, as most cases do not have classic manifestation and celiac disease is now recognized in adults also with atypical manifestations. Crohn's disease is also a common cause of chronic diarrhea and it should not be confused with intestinal tuberculosis and proper evaluation and diagnosis should be done before starting empirical ATT.

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Etiology	**Number (%)**
Celiac disease	n=54 (54%)
Tropical sprue	n=32 (32%)
Crohn's disease	n=4 (4 %)
Intestinal Tuberculosis	n=4 (4%)
AIDS	n=2(2%)
Amyloidosis	n=2 (2%)
Giardiasis	n=2 (2%)
Total Patients	**n=100**

Table 1: Etiology of chronic diarrhoea

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