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Celiac Disease Prevalence in IBD Patients

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Abstract

Introduction: Celiac disease (CeD) and ulcerative colitis (UC) share a bidirectional association. People with UC have a higher risk of developing CeD, and vice versa. Both are immune-mediated disorders sharing genetic and environmental risk factors. When they co-exist, patients often present with pan colitis and may require more intensive Immunomodulatory treatments.

Aim of Study: To determine celiac disease prevalence in inflammatory bowel disease patients.

Materials & Methods: It was prospective study conducted at Department of Medical Gastroenterology, Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, over a period of two years from 1st July, 2024 to 30th June, 2026. Our department is a high flow center and caters huge load of Inflammatory bowel disease patients, in which predominantly are ulcerative colitis. All these IBD patients have been diagnosed on basis of clinical presentation, biochemical investigations, Colonoscopic biopsy and Histopathological examination of the same. Hence, 500 IBD patients who reported for consultation in above time period and gave valid written consent were enrolled in the study and serum IgATTG antibody test and those found positive were subjected to endoscopy and duodenal biopsy. The Marsh classification was used for grading of celiac disease.

Observation and Results: Out of total five hundred participants in study group, 490 were of ulcerative colitis and 10 of Crohn's disease. All these patients were confirmed on basis of clinical presentation, biochemical

labs, Colonoscopic biopsies and Histopathological examination. All these 500 IBD patients were screened with serum IgATTG antibody test and who were found to be positive were subjected to endoscopy and duodenal biopsies. The biopsies which were found to be suggestive of celiac disease were graded on basis of Marsh's classification. All these confirmed celiac patients were put on strict gluten restricted diet, in addition to IBD department. Out of the total study group of 500 IBD patients, 15 were confirmed to be having celiac disease. The serum IgATTG antibody level ranged between 37 IU/ml to 119 IU/ml (normal range 0-20 IU/ml). On Marsh grade classification, 7 patients had grade 1, 6 patients had grade 2 and only 2 patients had grade 3. It reflected that celiac disease is not severe in IBD patients, as majority had lower level of serum IgATTG antibody level and lower grade of Marsh's classification. The probable explanation can be as all these IBD patients were on immunosuppressive therapy with azathioprine and steroids. Out of these 15 confirmed celiac disease patients, 12 were having ulcerative colitis and 3 were having Crohn's disease.

Conclusion: Celiac disease and IBD both have autoimmune origin and can co-exist in small subset of patients. Hence, merits vigil and screening for overlap in every individual case of celiac or IBD for better management. It can also help in positive response in refractory patients of celiac or IBD**.**

Keywords: Celiac Disease, Ulcerative Colitis, Crohn's Disease, Serum Igattg Antibody, Colonoscopy

Introduction

Celiac disease (CeD) and Inflammatory bowel disease (IBD) including ulcerative colitis (UC) and Crohn's disease are both immune-mediated entero pathies. It is rare for both celiac disease and IBD to occur together in an individual patient. This association has been reported in adults, but very rarely in children. While rare, patients with celiac disease have a 5 to 10 times greater risk of developing inflammatory bowel diseases (IBD), including UC. Conversely, UC patients have a notably increased risk of developing celiac disease.[1,2] Research indicates a common barrier defect, with genetic susceptibility markers (such as the HLA-DQ2 and HLA-DQ3 alleles) associated with both diseases.[1,2] Symptoms frequently overlap (e.g., chronic diarrhea, abdominal pain, weight loss, and fatigue), making diagnosis challenging. If an IBD patient does not respond well to standard biologic or Immuno-suppressive therapies, CeD should be investigated.

Aim of Study

To determine celiac disease prevalence in inflammatory bowel disease patients.

Material and Methods

It was prospective study conducted at Department of Medical Gastroenterology, Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, over a period of two years from 1st July, 2024 to 30th June, 2026. Our department is a high flow center and caters huge load of Inflammatory bowel disease patients, in which predominantly are ulcerative colitis. All these IBD patients have been diagnosed on basis of clinical presentation, biochemical investigations, Colonoscopic biopsy and Histopathological examination of the same. Hence, 500 IBD patients who reported for consultation in above time period and gave valid written consent were enrolled in the study and serum IgATTG antibody test and those found positive were subjected to endoscopy and duodenal biopsy. The Marsh classification was used for grading of celiac disease.

Observations & Results

Out of total five hundred participants in study group, 490 were of ulcerative colitis and 10 of Crohn's disease. All these patients were confirmed on basis of clinical presentation, biochemical labs, Colonoscopic biopsies and Histopathological examination. All these 500 IBD patients were screened with serum IgATTG antibody test and who were found to be positive were subjected to endoscopy and duodenal biopsies. The biopsies which were found to be suggestive of celiac disease were graded on basis of Marsh's classification. All these confirmed celiac patients were put on strict gluten restricted diet, in addition to IBD department. Out of the total study group of 500 IBD patients, 15 were confirmed to be having celiac disease. The serum IgATTG antibody level ranged between 37 IU/ml to 119 IU/ml (normal range 0-20 IU/ml). On Marsh grade classification, 7 patients had grade 1, 6 patients had grade 2 and only 2 patients had grade 3. It reflected that celiac disease is not severe in IBD patients, as majority had lower level of serum IgATTG antibody level and lower grade of Marsh's classification. The probable explanation can be as all these IBD patients were on immunosuppressive therapy with azathioprine and steroids. Out of these 15 confirmed celiac disease patients, 12 were having ulcerative colitis and 3 were having Crohn's disease.

Table 1: Showing Distribution of IBD Patients

Total IBD Patients	Ulcerative Colitis	Crohn's Disease
500	490 (98%)	10 (2%)

Table 2: Showing Distribution of IBD Patients on basis of co-existent Celiac disease

Total IBD Patients	Found to be having Celiac	Not having Celiac
500	15 (3%)	485(97%)

Table 3: Showing Grading of Celiac disease in IBD Patients.

Total IBD Patients with Celiac	Serum IgATTG (20-50 IU)	Serum IgATTG (50-100 IU)	Serum IgATTG (100-150)	Marsh's Grade 1	Marsh's Grade 2	Marsh's Grade 3
15	6 (40%)	6 (40%)	3 (20%)	7 (46.66%)	6 (40%)	2 (13.3%)

Statistical Analysis

All the data was entered in Microsoft Excel and was analysed using SPSS 15.0 version.

Discussion

Celiac disease (CeD) is a chronic immune-mediated enteropathy triggered by dietary gluten exposure in genetically predisposed individuals.[3] The global prevalence is estimated at 1.0–1.4%, [4] while studies from India report a prevalence of about 1.04% in Northern regions and between 0.3% and 1.23% across different parts of the country.[5,7] Diagnosis requires a combination of serological testing, upper gastro-intestinal endoscopy (UGIE), and characteristic Histopathological findings.[8] Ulcerative colitis (UC) and Crohn's disease (CD) are the major forms of inflammatory bowel disease (IBD), characterized by chronic intestinal inflammation in genetically susceptible individuals. CeD and IBD share several clinical and biological features, including genetic susceptibility through human leucocyte antigen (HLA) D Q 2 / D Q 8 haplotypes and compromised mucosal barrier integrity.[9] Coexisting CeD in patients with IBD has been associated with extensive colitis, refractory

symptoms, and increased risk of disease flares, [10] making early detection clinically important.

Conclusion

Celiac disease and IBD both have autoimmune origin and can co-exist in small subset of patients. Hence, merits vigil and screening for overlap in every individual case of celiac or IBD for better management. It can also help in positive response in refractory patients of celiac or IBD.

References

1. Day, A. and Abbott, G. (1999), Simultaneous presentation of coeliac disease and ulcerative colitis in a child. Journal of Paediatrics and Child Health, 35: 204-206. https://doi.org/10.1046/j.1440-1754.1999.t01-1-00328.

2. Cheng SX, Raizner A, Phatak UP, Cho JH, Pashankar DS. Celiac disease in a child with ulcerative colitis: a possible genetic association. J Clin Gastroenterol. 2013 Feb; 47(2):127-9. Doi: 10.1097/MCG. 0b013e318250e468. PMID: 23314669; PMCID: PMC4425271

3. Ludvigsson JF, Leffler DA, Bai JC, et al. The Oslo definitions for coeliac disease and related terms. Gut 2013;62(1):43–52

4. Singh P, Arora A, Strand TA, et al. Global prevalence of celiac disease: systematic review and meta- analysis. Clin Gastroenterol Hepatol 2018; 16 (6): 823–836.e2.

5. Makharia GK, Verma AK, Amarchand R, et al. Prevalence of celiac disease in the northern part of India: a community-based study. J Gastroenterol Hepatol 2011; 26 (5):894–900.

6. Ramakrishna BS, Makharia GK, Chetri K, et al. Prevalence of adult celiac disease in India: regional variations and associations. Am J Gastroenterol 2016; 111 (1):115–123.

7. Sood A, Midha V, Sood N, et al. Prevalence of celiac disease among school children in Punjab, North India. J Gastroenterol Hepatol 2006; 21(10):1622–1625.

8. Fasano A, Catassi C. Clinical practice: celiac disease. N Engl J Med 2012; 367(25):2419–2426.

9. Solli d L M, Jabri B. Triggers and drivers of autoimmunity: lessons from coeliac disease. Nat Rev Immunol 2013; 13(4):294–302.

10. Casella G, D'Incà R, Oliva L, et al. Prevalence of celiac disease in inflammatory bowel diseases: a n I G - I B D multicentre study. Dig Liver Dis 2010; 42(3):175–178.