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Oral Manifestation of Inflammatory Bowel Disease in Tertiary Care Centre Hospital in South-Eastern Part of India: A Prospective Study

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Abstract: Background: Cohn's disease (CD) and ulcerative colitis (UC) remain two different chronic digestive disease that coming below the inflammatory bowel disease (IBD) group. Abdominal cramps, vomiting, and ulceration of the digestive tract are all signs of IBD. Follic acid and ironanaemia have occurred due to improper absorption of vitamins B,& D. Bothmalnutrition and anaemia cannister source severe oral health problems, along with erythema, oedema, and angular cheilitis, burning mouth syndrome i.e. sensation in the mouth, candidiasis, lichen planus and gingivitis. Aim: The main aim of the study was to record the different oral events in patients with IBD in a tertiary carehospital in south eastern part of India. Methods: The study included 100 patients with inflammatory bowel disease. All patients had an oral examination and data was collected in prescribed format. Results:Out of 100 patients in 54 patients IBD were studied i.e. 42 CD patients and 12 UC patients.CD was most frequently seen in female (66.66%) than male (33.33%) patients and age group ranged from 31 years to 60 years. More possibilities of IBD seen in patients having poor nutritional status habits, bruxism seen in 53 IBD patients i.e. 42 patients having CD and 11 patients having UC, temporomandibular disorder also seen and most frequent of hyper mobility in 35 patients and clicking in 18 patients.Decayed teeth mostly seen i.e. 46.3% , filled teeth was 42.6% and missing teeth was 11.1%. The most frequent findings were those of periodontitis (85.18%) and gingivitis (85.18%) followed by oral ulcer (81.48%), lip swelling (77.77%) and other lesions like gingival erosion (66.66%), lip crust (79.62%), mucosal tags (55.55%) and mucosal erosions (5.55%) were found in patients and these were highly seen in CD patients (77.77%) than UC patients (22.22%). Conclusion: Systematic oral manifestations may be considered as the initial diagnostic evaluation of patients with suspected CD. Early diagnosis will result in better treatment and pronostics for the patient.

Keywords: Inflammatory bowel disease (IBD), oral manifestations, Cohn's disease (CD), Ulcerative colitis (UC)

1. INTRODUCTION:

The disease of Cohn's ulceration and the colitis of ulceration are two separate chronic disorders of the gastrointestinal tract with IBD.1-4It can occur at any age, while no specific food or diet, anyenvironmental or behavioral or genetic factors may lead to the development of IBD.5-7Symptoms include abdominal cramping, diarrhoea and ulcers within the gastrointestinal tract.8-11Anaemia owing to improper preoccupation of vitamin D, vitamin B, folic acid and iron.12Malnutrence and anemia, together with erythema, oedema, angular cheilitis and glipsitis, burning mouth syndrome (brenny feeling), candidiasis, leukoplakic patches and gingivitis, can cause severe oral health problems..13-15 The prevalence of oral manifestation rate is calculated to be 0.5- 20 %16,17 also some studies estimated to 80%8,9. The visualization of cobblestone and mucosal tags are extremely indicative in CD.13This study is planned with this background to evaluate and compare early detection of these diseases by oral manifestations of disease.

2. MATERIALS AND METHODS

The Consecutive samples and prospective study was conducted in IMS and SUM Hospital and IDS. A total of 100 patients were enrolled in this study.Patients those were diagnosis withCD and UC were evaluated in Socio demographic data sheet and general Health Questionnaire were recorded from all the patients attending the GI OPD. Patients were evaluated for oral signs and symptoms in a prescribed format. Treatment was planned for oral lesions as well as disease proper.All the data collected were entered into excel and subjected for Statistical analysis. Written consent was obtained from every patient.

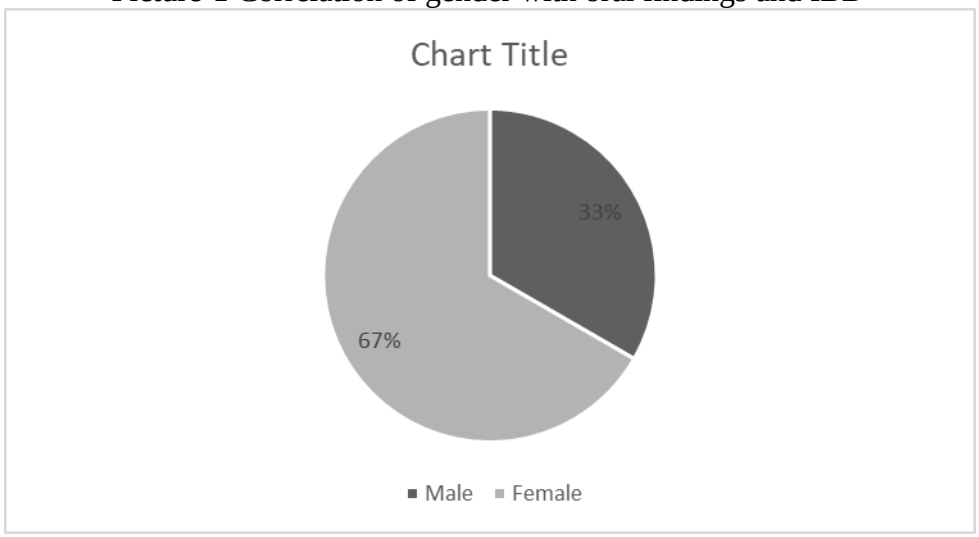
3. RESULTS

Out of 100 patients in 54 patients IBD were studied. Out of 54IBD patients, 42 were CD and 12 were UC. CD was most frequently seen in female (66.66%) than male (33.33%) patients and age group ranged from 31 years to 60 years. Patients having poor nutritional status habits found to be more possibilities of IBD. Bruxism seen in 53 IBD patients i.e. 42 patientshaving CD and 11 patients havingUC. Also temporomandibular disorder seen in IBD patients i.e. most frequent of hyper mobility in 35 patients and clicking in 18 patients.Furthermore in IBD patients decayed teeth mostly seen i.e. 46.3% , filled teeth was 42.6% and missing teeth was 11.1%. The most frequent findings were those of periodontitis (85.18%) and gingivitis (85.18%) followed by oral ulcer (81.48%), lip swelling (77.77%) and other lesions (98.14%). Other lesions like gingival erosion (66.66%), lip crust (79.62%), mucosal tags (55.55%) and mucosal erosions (5.55%) were found in patients and these were highly seen in CD patients (77.77%) than UC patients (22.22%).

Table-1 Correlation of age with oral findings and IBD

Type of IBD/ Age (Years)	1-30 (n)	31-60 (n)	61-90 (n)	Total (n)
Crohn's Disease	07	29	06	42
Ulcerative Colitis	02	09	01	12
None/ Normal	13	30	03	46

Picture-1 Correlation of gender with oral findings and IBD



Picture-2

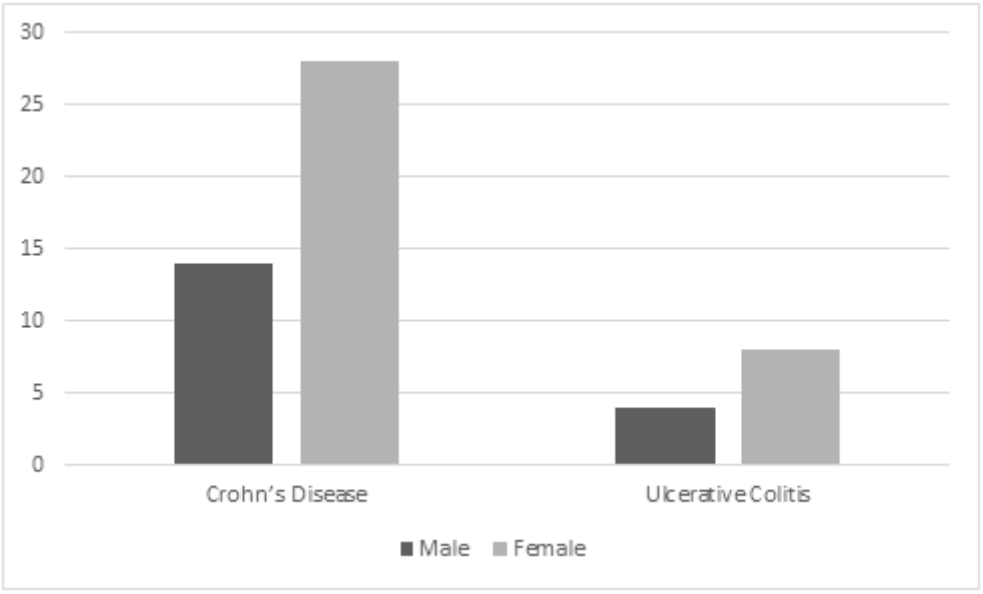


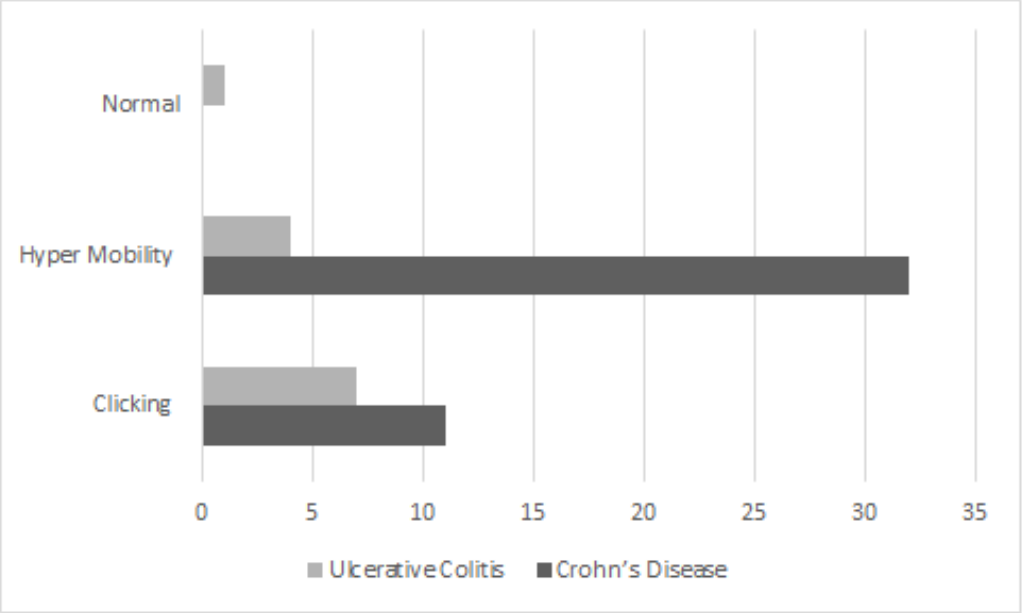
Table-2 Correlation of nutritional status with IBD

	Fair(n)	Good(n)	Poor(n)
Crohn's Disease	02	00	40
Ulcerative Colitis	02	00	10
Total	04	00	50

Table-3 Correlation of Bruxism with IBD

	Bruxism Present (Yes)	BruxismAbsent(No)
Crohn's Disease	42	00
Ulcerative Colitis	11	01
Total	53	01

Picture-2 Correlation of temporomandibular disorder with IBD



Picture-3 Correlation of decayed, filled and missing teeth with IBD

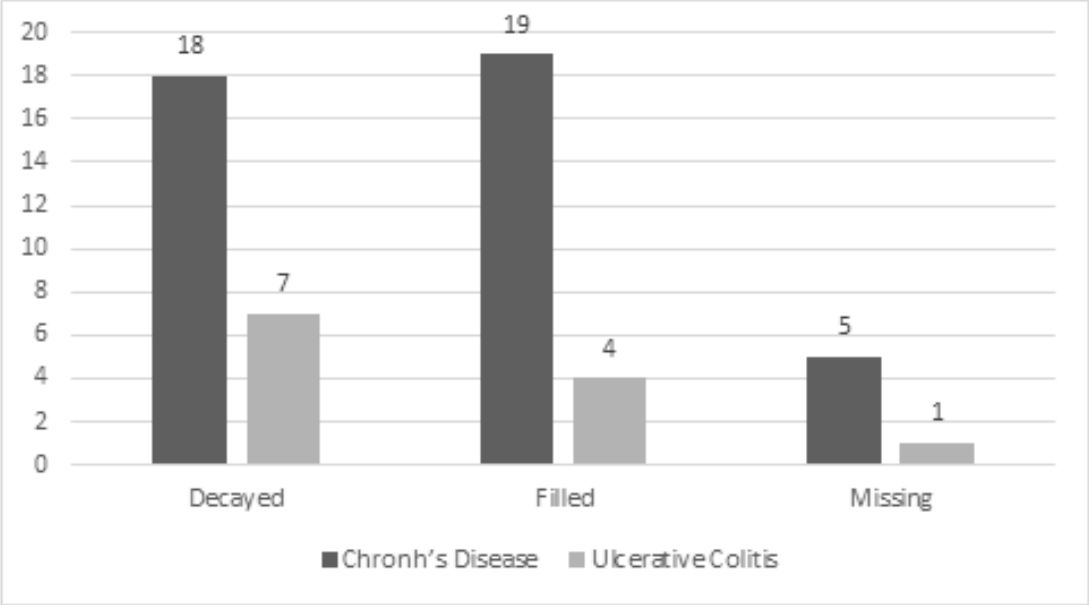


Table-4 Correlation of all oral lesions and IBD

	Crohn's Disease	Ulcerative Colitis	Total
Periodontitis	37	09	46
Gingivitis	37	09	46
Oral Ulceration	37	07	44
Lip swelling	34	08	42
Any other lesions (If any)	41	12	53

4. DISCUSSIONS

The current future study has analyzed how inflammatory bowel disease has been associated with oral manifestations.

CD is a provocative sickness (multisystem) involving genetic factors, immunologic factors and environmental factors. The disease may be caused by changes in the immune system and environmental risk factors.2 The most acceptable theory of CD is that it brings about when an inappropriate mucosal inflammation response to an intestinal bacteria in a genetically subjected host.3,4

The study of Falodia et al reported that female (60%) were more affected by CD as compared to male patients (40%) and the oral manifestations were more common in female (22) as compared to male patients (11).1Similar to this in our study found that female patients (66.6%) were mostly affected by CD than male patients (33.3%) and oral manifestations were commonly seen in female (36) than male (18) patients.

A study by Bucci et al 2018 suggested that sleep bruxism was more frequent in CD patients compared to UC patients.18 In this study also similar result observed i.e. bruxism was mostly seen in CD patients (77.77%) than in UC patients (20.37%).

The studies conducted by Falodia et al 2019, Harty et al and Pittock et al indicated that oral manifestations were very common in CD patients1,8,9 and these findings almost similar to this study. The higher frequency of oral manifestations was due to the proper examination of oral cavity of CD patients by experienced dentist.

The symptoms of IBD patients include periodontitis (85.18%), gingivitis (85.18%), oral ulceration (81.48%), lip swelling (77.77%) followed by other lesions. In the oral region of IBD patients varieties of specific and non-specific lesions can be seen, in this study the gingival erosion (66.66%), lip crust (79.62%), mucosal tags (55.55%) and mucosal erosion (5.55%) were observed which is similar to the findings of Boirivant et al 2012, Ham et al 2014 and Wilkins et al 2011.19-21Some literature found that oral lesions of other indications and gastrointestinal ulcers could occur either before or after theonset.22The activity level of chronic inflammatory process in the gastrointestinal tract can indicated by the severity of oral lesions.23

5. CONCLUSIONS

So, this study confirms that oral manifestations are common in IBD patients. The clinical oral findings by dentists before its manifestations in the gastrointestinal tract should be

considered as a diagnostic tool for early detection of CD. The clinician will warn to gastrointestinal lesions Mucocutaneous and granulomateous Lesions in the oral cavity for the examination of the gastrointestinal tract. The Clinic shouldheedful (warning) Mucocutaneous and granulomate lesions of the oral area with suspected CD.Early diagnosis of CD would lead to better management of patient and prognosis.

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