

Association of Self Medication with Analgesics and Smoking among Inflammatory Bowel Disease Patients

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Abstract: *Background: Chronic inflammatory bowel disease (IBD) is typically begins in early adulthood with recurring diarrhoea, stomach pain, and blood in the stool. Crohn's Disease (CD) and Ulcerative Colitis (UC) are the two most common IBD conditions. Despite the fact that CD and UC have many similarities, they differ in terms of clinical, endoscopic, and risk factor associations. Various studies have found disparities in their risk variables, such as smoking and the propensity of self-medicating with analgesics. Objective: To determine the proportion of CD and UC among IBD. to explore the proportion of self-medication with analgesics and smoking in patients with IBD patients and compare the exposure of smoking and self medication with analgesic prior to diagnosis in patients of UC and CD.*

Keywords: Association Medication Analgesics, Smoking Inflammatory Bowel Disease, Chronic Crohn's Disease, Ulcerative Colitis Diarrhoea, Stomach pain, Blood Risk factor Studies, Diagnosis Exposure Clinica

1. Background

Inflammatory Bowel Disease (IBD) is a chronic disorder that usually begins in early adulthood, and whose symptoms include recurrent diarrhea, abdominal pain, and the presence of blood in stool [1]. The two main disorders of IBD are Crohn's Disease (CD) [1] and Ulcerative Colitis (UC) [2]. Although CD and UC share various characteristics, they dissent in terms of clinical, endoscopic, and histological features [2]. CD is characterized by an inflammatory process that can affect any portion of the gastrointestinal tract, from the mouth to the perianal area, in a discontinuous and transmural fashion. Depending on the location of the inflammation, CD has traditionally been classified into ileal, colonic, ileocolonic, and upper gastrointestinal phenotype [1].

In contrast, UC is a chronic and idiopathic inflammatory disorder of the colonic mucosa that begins in the rectum and usually extends proximally in a continuous manner through the whole colon or through a defined area. However, some patients with proctitis or left - sided colitis may have a cecal inflammation patch. Bloody diarrhea is the characteristic symptom of UC. The clinical course is unpredictable and is marked by alternating periods of exacerbation and remission [2]. Several implicated environmental factors have been studied, cigarette smoking being the most widely described. Interestingly, although cigarette smoking increases the risk of CD, it is currently the epidemiological factor most associated with a lower incidence of UC [3]. Three clinical studies from Israel found no correlation between smoking and CD [4 - 6].

This led us to postulate that the opposite effects of smoking on CD and UC are a consequence of the site of inflammation (colon vs the small intestine) and not with the specific disease (CD vs UC).

Similar to smoking; Analgesic like NSAIDs consumption is associated with upper and lower gastrointestinal tract damage, [7, 8] sometimes producing lesions that may resemble inflammatory bowel disease (IBD), [9] and it is

considered to be associated with an increased risk of IBD flares. [10] With this background present study was conducted with below objectives.

2. Objective

- 1) To determine the proportion of crohn's disease and ulcerative colitis among Inflammatory Bowel Disease patients.
- 2) To explore the proportion of self - medication with analgesics and smoking in patients with inflammatory bowel disease patients.
- 3) To compare the exposure of smoking in ulcerative colitis and crohn's disease.
- 4) To compare the exposure of self medication with analgesic prior to disease diagnosed in patients of ulcerative colitis and crohn's disease.

3. Methodology

The presented cross - sectional study was conducted among inflammatory bowel disease patients treated in the department of medicine, Saraswathi institute of medical sciences.

Sequential sampling method was used for selection of cases for the data collection.

Study duration: September 2021 to march 2022

Past history regarding addiction of smoking and self medication with analgesic were gathered from patients by asking below questions.

Question 1: "Prior to your diagnosed with inflammatory bowel disease, were you taking any pain killer by your own without consulting physician?"

Question 2: "Did you have habit of smoking prior to diagnosis of inflammatory bowel disease?"

After obtaining data, analysis was done as per descriptive as well as analytical cross sectional study design.

Volume 11 Issue 9, September 2022

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4. Result

Table 1: Baseline information of IBD patients

Variable	CD (n=128)	UC (n=108)	Total (n=236)
Male	68 (53.1%)	44 (40.7%)	112 (47.5%)
Female	60 (46.9%)	64 (59.3%)	124 (52.5%)
Mean age of patients (Years)	43.3	48.7	46 years.
Mean age at diagnosis (years)	30.4	35.7	33.05 years
median duration of disease diagnosis	9	7	8 years

Total 236 patients with IBD were enrolled in study.

Among them 128 (54.2%) were confirmed cases of Crohn's disease (CD) and 108 (45.8%) were of ulcerative colitis (UC) patients.

Gender distribution among total study participants were equally distributed with mean age of 43.3 years in CD and 48.7 years in UC group.

Median duration of IBD is 8 years comprising 7 years for UC and 9 years for CD.

Table 2: Past history of smoking and IBD patients

Variable	CD	UC	Total
Smoker	92 (71.8%)	35 (32.4%)	127 (53.8%)
Non smoker	36 (28.2%)	73 (67.6%)	109 (46.2%)
Chi square= 36.7 p= 0.00001*			

Out of total 236 inflammatory bowel disease patients 127 (54%) were given past history of smoking Among them past exposure of smoking were more prevalent among CD patients compare to UC patients (71.8% vs.32.4%) The difference in proportion of smoker in both group is significantly present which shows smoking is more associated with CD than the UC.

Table 3: Past history of smoking and IBD patients

P/H/O analgesics	CD	UC	Total
Present	83 (64.8%)	37 (34.2%)	120 (50.8%)
Absent	45 (35.2%)	71 (65.8%)	116 (49.2%)
Chi square= 21.92 p= 0.00001*			

Almost 50% of inflammatory bowel disease patients were given history of taking self - medication with analgesic. Patients with history of taking analgesics were higher in CD than the UC (65% vs.34%) The difference in proportion of history of taking analgesics in both group is significantly present which shows self medication with analgesics is more associated with CD than the UC.

5. Conclusion

During the 6 month duration of cross sectional survey, study found total 236 patients with IBD with 54% proportion of crohn's disease and 46% with ulcerative colitis. More than half of the IBD patients had past history of self medication

with analgesics and smoking. Smoking is more associated with crohn's disease compare to ulcerative colitis. Similarly, past history of self medication was also found more common in CD than the UC.

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