

A Study On The Dietary Habits And Their Association With The Symptoms In Patients With Hemorrhoids And Fissure-in-Ano: A Case Control Study From A South Indian Tertiary Care Hospital.

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ABSTRACT

Background: Both hemorrhoids and fissure-in-ano contribute to the spectrum of anorectal disorders which generate significant patient discomfort and disability. Etiological factors associated with development of symptomatic hemorrhoids include intake of low fiber diet, inadequate fluid intake, altered bowel habits leading to constipation etc. Aim: 1.To study the dietary habits of patients presenting with haemorrhoids and fissure in ano. 2. To determine the effect of altered dietary habits on the symptomatology. **Methods:** Case Control study conducted over one year between august 2016 to august 2017 at Department of surgery, Government Medical College, MANJERI. **Results:** The mean age of patients having hemorrhoids is 42.9years in case group and 44.0years in control group. Where as, the mean age of patients with fissure-in-ano is 37.1years in case group and 39.6years in control group. Majority of patients in the study population of hemorrhoids are male (84%) while female patients (56%) have more anal fissures. The p value of all analysis is <0.05. **Conclusion:** From this study, it has been concluded that in patients with hemorrhoids, bleeding per rectum gets aggravated with consumption of non vegetarian food items, fasting in the morning and intake of ≤ 1L of oral liquids and reduced consumption of diet containing fibre.

Keywords: Hemorrhoids, Fissure-In-Ano, Conservative Management, Fibre Diet, Meal Pattern, Fluid Intake.

INTRODUCTION

Anorectal disorders include a diverse group of pathologic disorders that generates significant patient discomfort and disability.[1] Though these are frequently encountered in general medical practice, these often receive casual attention and temporary relief. Hemorrhoids and fissure in ano contribute to the spectrum of anorectal disorders. Passage of hard stool, irregularity of diet, consumption of spicy and pungent food, faulty bowel habits, and lack of local hygiene can contribute for initiation of the pathology. Fibers are the prime requirement for healthy bowel function. Plant foods contain fibers, a variety of non-digestible complex carbohydrates.[2] After all the soluble components derived from digested fats, proteins, and carbohydrates, along with the vitamins and minerals

are absorbed from the small intestine, then non-digestible fibers remain (along with a huge number of friendly microorganisms) to form the bulk of the remnant stool. These fibers have the capacity to hold water, thereby increasing the stool volume further.[3] Also, the more foods and beverages that are consumed, the greater will be the intestinal content, and therefore the frequency and amount of the bowel movement.[4] Though patients come for medical attention and most of the time surgeons try a trail of conservative measures, patient fail to follow the medical management and succumb to surgical intervention.[5]

Aims and Objectives

1. To study the dietary habits of patients presenting with haemorrhoids and fissure in ano.
2. To determine the effect of altered dietary habits on the symptomatology.

MATERIALS AND METHODS

Study design

Case Control study conducted over one year between august 2016 to august 2017 at Department of surgery, Government Medical College, Manjeri.

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Cases: Patients attending OPD of all the units of the Department of General Surgery who have haemorrhoids or fissure-in-ano, in whom symptoms like painful defecation, bleeding per rectum, mass per anum or constipation of any duration, have aggravated for the past 2 weeks.

Controls: Patients attending OPD of all units of Department of General Surgery having haemorrhoids or fissure-in-ano with no aggravation of symptoms.

3. Inclusion criteria:

- Patients of both sexes of age >20yrs who are clinically diagnosed to have fissure-in-ano (acute and chronic) or haemorrhoids(external and internal) and who give consent for the study

4. Exclusion criteria:

- Pregnant women
- Anorectal carcinoma
- Previously diagnosed case of Crohn’s disease and ulcerative colitis
- Mentally retarded
- Patient who have had previous surgery in the anal region
- Patients with history of bleeding diathesis
- Immunodeficiency patients
- Post hemorrhoidectomy/banding/sclerotherapy

RESULTS & DISCUSSION

Of the 50 patients with hemorrhoids, 24 patients with recent aggravation of symptoms were included in the case group and 26 who have less or no symptoms were included into the control group. Likewise, of the 50 patients with fissure-in-ano, 26 patients with recent aggravation of symptoms were included in the case group and 24 patients, who have less or no symptoms, were included into the control group.

Table 1: Frequency & percentage of study population.

Diagnosis		Frequency	Percent
Hemorrhoid	Case	24	48.0
	Control	26	52.0
	Total	50	100.0
Fissure	case	26	52.0
	control	24	48.0
	Total	50	100.0

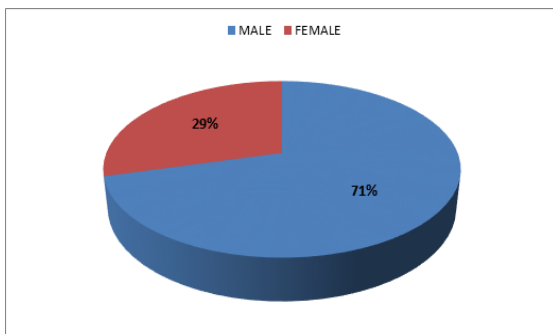


Figure 1: Gender distribution of case subjects with hemorrhoids

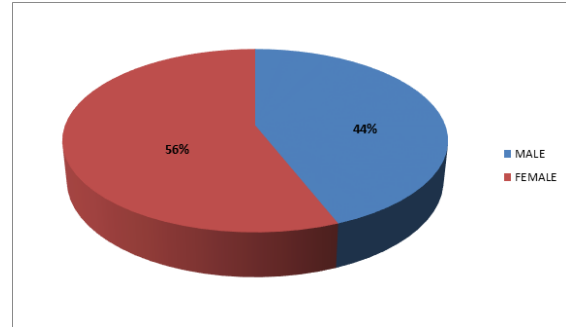


Figure 2: Gender distribution of study population with fissure-in-ano (n=50)

5.4 Dietary Habits Evaluated In The Study Population
Hemorrhoid group:

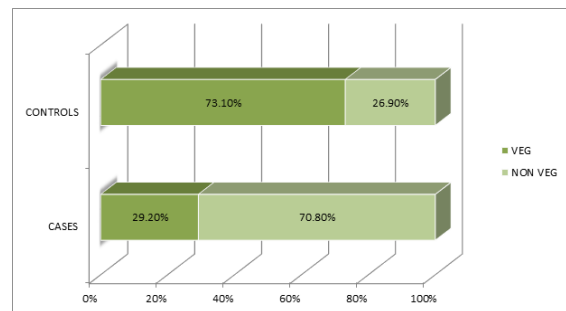


Figure 2: Comparison of type of diet in the study population (hemorrhoids)

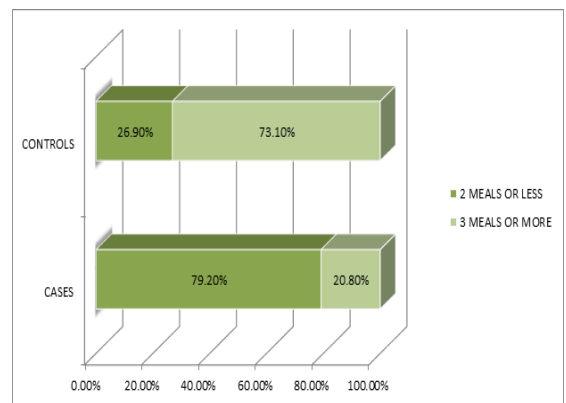


Figure 2: Comparison of meal pattern in the study population (hemorrhoids)

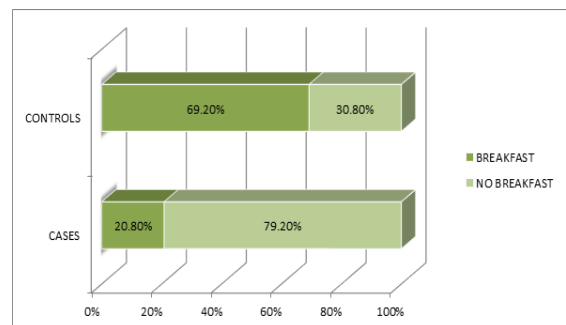


Figure 3: Comparison of habit of skipping breakfast in the study population (hemorrhoids)

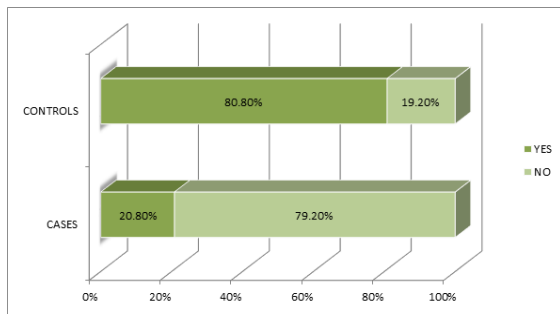


Figure 4: Comparison of habit of fruit/salad intake in the study population (hemorrhoids)

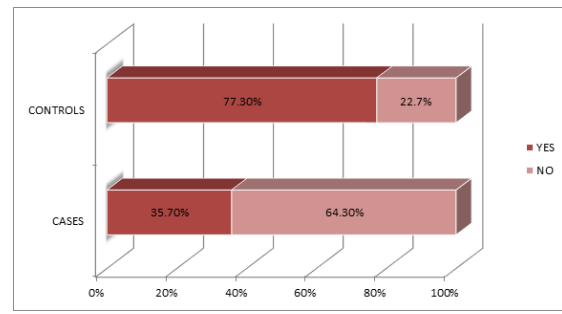


Figure 8: Comparison of habit of fruit/salad intake in the study population (fissure-in-ano)

Fissure-In-Ano Group

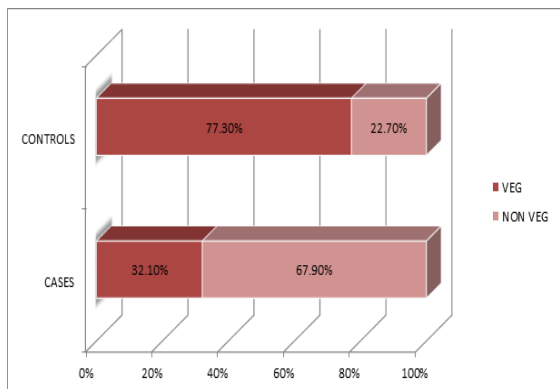


Figure 5: Comparison of type of diet in the study population (fissure-in-ano)

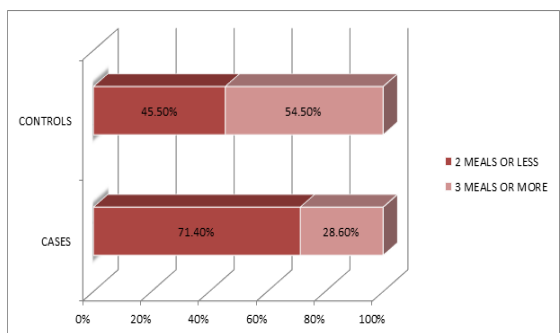


Figure 6: Comparison of meal pattern in the study population (fissure-in-ano)

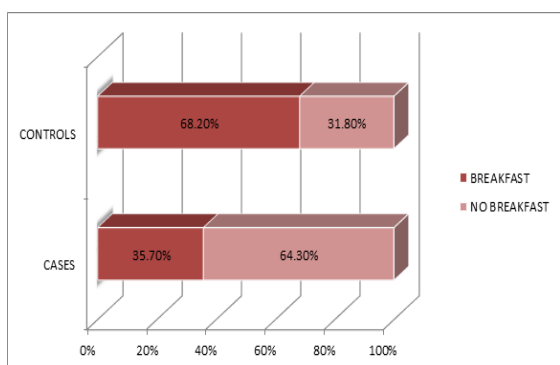


Figure 7: Comparison of habit of skipping breakfast in the study population (fissure-in-ano)

Patients with age more than 20 years were included in the study. Of the study population with hemorrhoids, the mean age in the case group was 42.88 with a standard deviation of 13.687 and standard error of mean of 2.794. Whereas, in the control group, the mean age was 44.0 with a standard deviation of 13.568 and standard error of mean of 2.661. Of the study population with fissure-in-ano, the mean age of the case group was 37.15 with a standard deviation of 7.898 and standard error of mean of 2.417. 70.8% of case groups with hemorrhoids were males and 29.2% were females 96.2% of control subjects with hemorrhoids were males In the study population with fissure-in-ano, 38.5% were males in the case group and 50% of the control groups were males

The progression of grade of hemorrhoids will be increased by 2.2 fold only with a wide range of 95% confidence limits of 1.5-11.5 and there will be 2.8 fold increased chance of enlargement of sentinel tags in fissure-in-ano patients (95% CI-1.8-9.3). Constipation precipitated by consumption of non vegetarian food in hemorrhoids and fissure-in-ano have a high Odd's ratio of 6.7 and 6.3 respectively with narrow 95% confidence interval limits (1.0-2.9 & 1.7-7.3 respectively).

≤2meals per day were supposed to increase the chance of bleeding per rectum by 3.8 fold with 95% confidence limits of 1.0 to 8.8 with a p value of 0.001 in patients with hemorrhoids. Whereas in fissure patients, the odds ratio is 2.5 with a 95% confidence limits of 1.7-7.7. Meal pattern precipitating painful defecation has increased confidence limits reducing the strength of the association between meal pattern and aggravation of bleeding per rectum in both groups. Progression of grade in hemorrhoids will be increased by 4.7 fold with 95% confidence limits of 2.6-4.6. In patients with both hemorrhoids and anal fissure, the analysis of progression of mass per anum with meal pattern showed an increased range of 95% confidence limits (95% CI: 2.5-12.7 & 1.0-9.8 respectively). Constipation is supposed to get aggravated with intake of less frequent meals by 3.3 fold in hemorrhoid group (95% CI: 1.8-2.6) and by 5.5 fold in fissure group (95% CI:2.7-7.7).

Patients having hemorrhoids with a habit of fasting by skipping the breakfast have increased chance of bleeding per rectum (Odds ratio:5.8; 95% CI:1.1-4.0); increased pain while defecation (Odd's ratio:3.7; 95%CI:1.6-4.6) and increased constipation (Odd's ratio:4.3; 95%CI:2.8-5.0). Progression of grade of hemorrhoids has wide confidence intervals with an Odd's ratio of 2.5 though the p value is 0.03. In patients with fissure-in-ano, the odds ratio showing association of bleeding per rectum and breakfast skipping is 4.6 with a wide 95% confidence interval (1.8-8.1) and for painful defecation and breakfast skipping is 3.7 (95%CI:1.6-2.7). Constipation is aggravated by 4.6 fold (95%CI:1.8-8.1) in patients who skip breakfast. But progression of sentinel pile in fissure is not showing strong association in this study. In a study by Ahmed[6] et al. conducted in 1997, case group were those with hemorrhoids or anal fissure and control group were normal subjects. 36% in case group did not consume breakfast compared with 11% in the control group with an Odd's ratio of 7.5 and a p value of <0.003. In our study, we have show the association of aggravation of symptoms, in hemorrhoids and anal fissure patients with breakfast skipping.

The patients with anal fissure who avoid taking fruits or salads regularly have a 4.6 fold chance of aggravation of bleeding episode (95%CI:1.8-8.4), 4.7 fold increased chance of painful defecation episodes (95%CI:1.9-6.5).But this study does not give strong association between mass per anum & constipation with intake of regular use of fruits and salads. Whereas in hemorrhoid patients show strong association between mass per rectum (Odd's ratio: 4.7; 95%CI: 2.7-4.6& constipation (Odd's ratio: 6.3;95%CI: 1.7-2.9) with fruits and salads consumption. No strong association has been found in this study for hemorrhoid patients between bleeding episodes and painful defecation.

Patients with hemorrhoids, who have the habit of reduced water consumption during the day(\leq 1 L/day), have increased chance of bleeding per rectum (Odds ratio: 4.8; 95%CI:1.4-4.5) in anal fissure groups and increased painful defecation (Odds ratio:5.1; 95%CI:1.5-3.9), progression of prolapsed (Odd's ratio:1.2, 95%CI:2.1-3.6) and constipation (Odd's ratio:5.3; 95%CI:1.8-2.5). Patients with fissure-in-ano, who have the habit of reduced water consumption during the day (\leq 1 L/day), have increased painful defecation (Odds ratio: 3.9; 95%CI: 1.7-3.9), increased size of mass per anum (Odd's ratio:2.7, 95%CI:1.3-4.3) and constipation (Odd's ratio:3.3, 95%CI:1.5-3.3). But this study failed to show strong association between bleeding episodes and reduced fluid intake (Odd's ratio: 4.9; 95%CI: 1.8-9.7). In a study by Siesleff[7,10] at France in 1998, two groups of 50 subjects were studied (group 1 with hemorrhoid symptoms and group 2 with no proctological

abnormality). In a study by Mooesgaard[8] et al. in 1982, of the 52 patients with symptomatic hemorrhoids (grade 1 and 2), dietary fibre in the form of psyllium seeds were given to the treatment group and followed up before, at 6 weeks and 3 months of initiation. 22 patients (84%) in treatment group were symptomatically better ($p<0.025$) at 6 weeks and 16 patient (69%) continued to be have less episodes of bleeding and painful defecation at 3 months. The effect on bleeding showed a significant difference in favor of the fibre (RR 0.50, 95% CI 0.28 to 0.89).[9] . another study by Alonso-Coelle[29] in 2005, 7 randomized control trials enrolling a total of 378 participants to fibre or a non-fibre control were identified.[11]

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