

## Original Research Article

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# Evaluation of bowel habits in benign anorectal diseases

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### ABSTRACT

**Background:** Evaluation of bowel habit is useful indicator of functional gastrointestinal disorders. Assessment of bowel habit is retrospective in nature and it is best done by questionnaire technique. Aims and objectives of the study was to look for the bowel habit in common benign anorectal disorder.

**Methods:** One-hundred patients with benign anorectal diseases who presented in the Surgery out patient's department (SOPD) at AIIMS Rishikesh, India from January 2014 to December 2016 were included in the study. Inclusion criteria were all the cases of benign anorectal disorder attended in the Surgery OPD and exclusion criteria were cases with malignant anorectal disease. Patients were assessed on 7 questionnaires as bowel movements (number/day), consistency, feeling of incomplete defecation and/or difficult evacuation, straining at defecation, bleeding per rectum, pain during defecation, use of laxatives. These questionnaires were given to all these patients and asked to prepare a four-week daily diary.

**Results:** One hundred patients with benign anorectal diseases enrolled in the study. All the patients came in the follow up with four-week daily diary. Author have encountered mainly haemorrhoid, Fissure in Ano and fistula in Ano at the General Surgery OPD. Most common disease was haemorrhoid (51%) and least common was fistula in Ano (3%). Most common bowel habits in haemorrhoid was passage of hard stool (51%) whereas in fissure in Ano it was straining at stool and in fistula in Ano it was passage of hard stool (100%), straining at defecation (100%) followed by bleeding and pain during defecation (67% each). Frequency of bowel movement was one per day and consistency was hard in majority of male and female patients. Laxative was used by 29% patients mainly for hard stool, incomplete evacuation and straining at stool.

**Conclusions:** Bowel habit can be best investigated by questionnaire technique. Stool consistency is better guide of colonic transit time. Hard stool is the major cause of majority of the benign anorectal disorder.

**Keywords:** Bowel habits, Benign anorectal disorder, Questionnaire technique of bowel habit

### INTRODUCTION

Bowel habits vary widely among populations. It is very difficult to define the abnormal bowel habit, which is the root cause of majority of the benign anorectal disease. According to Rome II and III criteria for the diagnosis of constipation, there should be two or more of the following symptoms for 12 weeks, like straining at

defecation with passage of hard or lumpy stool for at least a quarter of occasions, sensation of incomplete evacuation for a quarter of occasions and three or less bowel movements in a week.<sup>1,2</sup>

In Rome IV criteria, functional constipation, functional diarrhea and irritable bowel syndrome are considered as a continuum rather than isolated disorder.<sup>3</sup> Evaluation of bowel habit is useful indicator of functional

gastrointestinal disorders. Assessment of bowel habit is difficult because of its highly private nature. Assessment of bowel habit is retrospective in nature and it is best done by questionnaire technique.<sup>4-8</sup> Normal bowel frequency is 3 to 21 motions per week.<sup>9</sup> Bowel movement is easy to assess but it is a poor guide of colonic function. Stool consistency is better guide of colonic transit time.<sup>10,11</sup>

This prospective study was aimed to assess the bowel habit in benign anorectal disorder at tertiary care center of North India. Aims and objectives of the study was to look for the bowel habit in common benign anorectal disorder.

## METHODS

This was a prospective study conducted at AIIMS Rishikesh, India from January 2014 to December 2016. The prospective study protocol was approved by local ethical committee. Informed consent was taken from all the participants included in the study. One-hundred patients with benign anorectal diseases who presented in the Surgery out patient's department (SOPD) at the Institute from 1<sup>st</sup> January 2014 to 31<sup>st</sup> December 2016 were included in the study. Inclusion criteria were all the cases of benign anorectal disorder attended in the Surgery OPD and exclusion criteria were cases with malignant anorectal disease. Patients were assessed on 7 questionnaires.

- Bowel movements (number/day)
- Consistency, hard or normal stool (according to Bristol stool chart scale- type-I hard nuts like stool, type-II sausage shaped hard stool, type-III sausage shaped with cracks on its surface, type IV- smooth and soft stool, type-V soft normal stool, type-VI mushy stool. Type -VII watery stool). Type IV and V is considered normal stool and type I and II is hard stool.

- Feeling of incomplete defecation and/or difficult evacuation
- Straining at defecation,
- Bleeding per rectum,
- Pain during defecation
- Use of laxatives

These questionnaires were assessed in SOPD for every patient with benign anorectal disease. These questionnaires were given to all these patients and asked to prepare a four-week daily diary. This four-week daily diary prepared by the patient was analyzed (Table 1). These answers were compared with their first SOPD visit response of these questionnaires.

## Statistical analysis

Statistical analyses were performed using Statistical Package for Social Sciences (SPSS) version 24.0, statistical software.

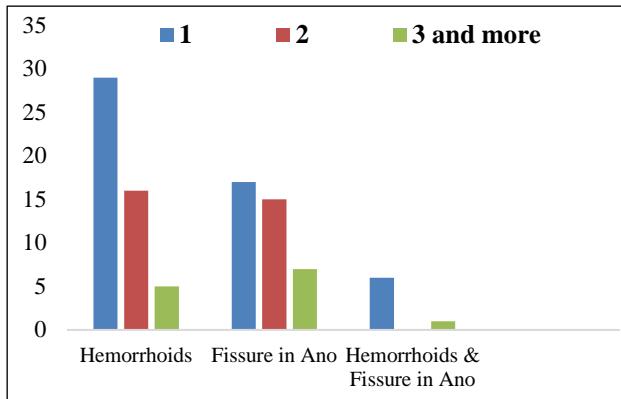
## RESULTS

One hundred patients with benign anorectal diseases enrolled in the study. All the patients came in the follow up with four-week daily diary. Author have encountered mainly hemorrhoid, Fissure in Ano and fistula in Ano at the General Surgery OPD. Few cases were having both hemorrhoid and fissure in Ano. Out of one hundred, 57 cases were male and 43 females. Youngest male patient was 16 years old and female was 17 years old. Most common disease was hemorrhoid (51%) and least common was fistula in Ano (3%). Most common bowel habits in hemorrhoid was passage of hard stool (51%) whereas in fissure in Ano it was straining at stool and in fistula in Ano it was passage of hard stool (100%), straining at defecation (100%) followed by bleeding and pain during defecation (67% each) (Table 1) (Figure 2).

**Table 1: Different types of symptoms in benign anorectal diseases and use of laxative.**

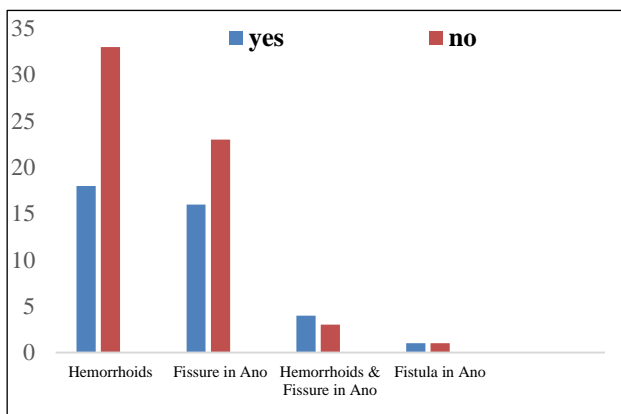
Diseases	Bowel movements (no. per/d)			Consistency of stool		Incomplete/difficult evacuation		Straining at defecation		Bleeding per rectum		Pain during defecation	
	1	2	>2	Hard	N	Y	N	Y	N	Y	N	Y	N
Hemorrhoid (n=51)	29	17	5	26	25	15	36	17	34	18	33	25	26
Percentage	56.8	33	9.8	51	49	29.4	70.5	33.3	66.6	35.2	64.7	49.1	50.9
Laxative use	-	-	-	6	-	2	-	1	-	-	-	-	-
Fissure in Ano (n=39)	17	15	7	15	24	7	32	26	13	16	23	31	8
Percentage	43.5	38	18	38.4	61.5	17.9	82	66.6	33.3	41	58.9	79.4	20.5
Laxative use	-	-	-	12	-	2	-	4	-	-	-	-	-
Hemorrhoids and fissure (N=7)	6	-	1	4	3	2	5	4	3	4	3	6	1
Percentage	85.7		14	57	43	28.5	71.4	57	43	57	42.8	85.7	14.2
Fistula in Ano (n=3)	2	-	-	3	-	1	2	3	-	2	1	2	1
Percentage	67			100		33	67	100		67	33	67	33
Laxative use (N= 29)	-	-	-	2	-	-	-	-	-	-	-	-	-

(Y- yes, N-no)

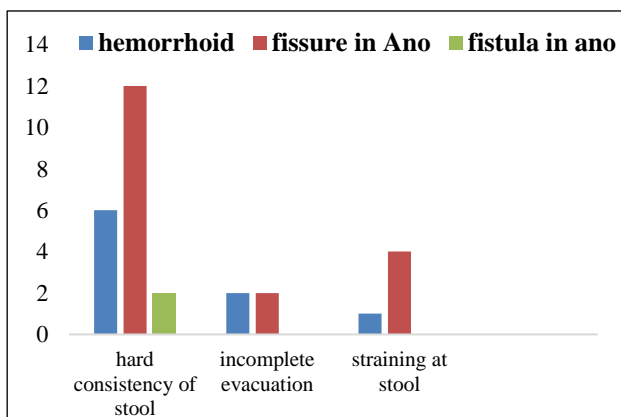


**Figure 1: Bowel movement per day in different benign anorectal diseases.**

Frequency of bowel movement was one per day and consistency was hard in majority of benign anorectal disorders in both male and female (Table 1) (Figure 1). Bristol stool chart scale was used to qualify stool as hard. Laxative was used by 29% patients mainly for hard stool, incomplete evacuation and straining at stool (Table 1, Figure 3).



**Figure 2: Incidence of bleeding per rectum in different types of benign anorectal disorders.**



**Figure 3: Use of laxative in different types of benign anorectal disorders.**

## DISCUSSION

Objective assessment of bowel habit is difficult and usually it is retrospective in nature.<sup>4-8</sup> It is very helpful in investigating the functional gastrointestinal disorders. Bowel habit can be best investigated by questionnaire technique. Connell AM, et al had also studied the bowel habit in the general population by questionnaire technique.<sup>12,13</sup>

Bleeding per rectum has long been accepted as a warning sign of malignancy but it is quite common in benign anorectal diseases. Bleeding per rectum may not be the isolated symptoms and other associated symptoms with rectal bleeding guides the clinical diagnosis and further investigations. Anorectal pain is usually indicative of benign disease. Anorectal pain will be present in malignancy, only when the lesion invades the anal canal or internal sphincter.

The results suggest that in majority of benign anorectal disorders, the more common bowel movements were one per day and consistency of the stool was hard (Table 1). Heaton KW et al mentioned that the most common bowel habit is once per day.<sup>14</sup> When stool enters the upper part of anal canal then it is sensed by the nerve cells and person develops urge for defecation. In constipation, there is desensitization of nerve cells and stools remains in colon and rectum for longer time. Due to this, more fluid is absorbed, and stools becomes harder. Stool consistency is a better predictor of whole-gut transit time than of defecation frequency or stool volume.<sup>15</sup> Hard consistency of stool can be the cause in majority of benign anorectal disorder.

Limitations of this study were a single center short period study based on four-week daily diary questionnaires with limited number of benign anorectal disease. Further long term and multicenter study required with more variety of benign anorectal disorders with actual recording of bowel symptoms.

## CONCLUSION

Bowel habit can be best investigated by questionnaire technique. Stool consistency is better guide of colonic transit time. Hard stool is the major cause of majority of the benign anorectal disorder.

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