

## A CROSS SECTIONAL STUDY ON ANO-RECTAL DISORDERS IN RELATION TO THEIR POSITION DURING DEFECATION

**Dr. Rohini Naikwad\***

PG Scholar, Department of Panchakarma, CSMSS Ayurved College and Hospital,  
Aurangabad.

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### \*Corresponding Author

**Dr. Rohini Naikwad**

PG Scholar, Department of  
Panchakarma, CSMSS  
Ayurved College and  
Hospital, Aurangabad.

### ABSTRACT

**Introduction:** Present study is conducted to evaluate the relation of Ano-rectal disorders to their position during defecation. **Material and Method:** 100 subjects having anorectal disorders like haemorrhoid, fistula in ano, fissure in ano were randomly selected and were approached. Questionnaires were distributed among and different questions regarding their toilet habits, Position during defecation, types of toilet that they use etc. were asked in order to get the data in systematic manner for statistical purpose. **Result:** After assessment of 100 subjects, Statistical analysis was done by using descriptive and inferential statistics using chi square test and the study showed that anorectal disorders are quite common in those who use Western

toilets but it was not found significant. **Conclusion:** The present study was conducted in order to find that is there any relationship between anorectal disorders and different positions of defecation viz. squatting and sitting. It was found that maximum number of subjects were the Western toilets users and the anorectal diseases were found to be more common in them.

**KEYWORDS:** Anorectal disorders, position during defecation, Questionnaires.

### INTRODUCTION

Ano-rectal disorders affect millions of people around the world, and represent a major medical and socioeconomic problem now a days. Multiple factors have been claimed to be the aetiologies of ano-rectal diseases, including constipation and prolonged straining. The abnormal dilatation and distortion of the vascular channel, together with destructive changes in the supporting connective tissue within the anal cushion, is a paramount finding of ano-rectal disorders.

Ano-rectal disorders affect the anal canal and rectum. Fissures, fistulas, and hemorrhoids are among the most common ano-rectal conditions. In some cases, symptoms like pain, itching, burning, bleeding or swelling can significantly affect a patient's lifestyle.

The anal canal commences at the level where the rectum passes through the pelvic diaphragm and ends at the anal verge. The Muscular junction between the rectum and anal canal can be felt with the finger as a thickened ridge – the Anorectal ‘bundle’ or ‘ring’.

The anus is the outlet to the gastrointestinal tract, and the rectum is the lower 10 to 15 cm of the large intestine. Four to eight anal glands drain into the crypts of Morgagni at the level of the dentate line. The dentate line also delineates where sensory fibers end. Above (proximal to) the dentate line, the rectum is supplied by stretch nerve fibers but not pain nerve fibers. Conversely, below the dentate line there is extreme sensitivity, and the perianal area is one of the more sensitive areas of the body. The evacuation of bowel contents depends on action by the muscles of both the involuntary internal sphincter and the voluntary external sphincter.

Although the most common ano-rectal disorders are not considered life threatening, they can negatively impact patients' activities of daily living and quality of life. Recurrence rate of ano-rectal disorders is more.

A squat toilet (also known as a squatting toilet, Indian toilet,) is a toilet used by squatting, rather than sitting. The very fact that such a posture comes naturally even to babies in the womb and (children while playing) further proves that it is the most commonly used posture by humans.

The flush toilet was invented during 16th century, it caught some eyeballs but was still limited to royalty who adored its seating posture which seemed more “dignified” (since its posture resembled sitting on a throne).

In modern era due to advancement in lifestyle, people are shifting from Indian toilet to Western toilet as they consider it a sign of modernization. Due to this or another reason, the rate of patients suffering from ano-rectal disorders has been increased these days. Hence to rule out the cause of ano-rectal disorders in relation with lifestyle this study has been taken.

**Need of the study**

- It is observed that anorectal disorders are commonly seen in today's era because of faulty lifestyle and habits.
- In modern era due to advancement in lifestyle, people are shifting from Indian toilet to western toilet as they consider it a sign of modernization.
- If the patients continue to use western toilet even after anorectal operation, to rule out is there any recurrence in the symptoms or not.
- Does the use of western toilets influence over rate of healing in post operative anorectal cases or not.
- To find the solutions for above queries, present study has been taken.

**METHODOLOGY**

Type of study: Cross Sectional Study.

Duration of study: 6 Months

Sample size: 100 Participants

Type of sampling: Random

Study center: Ayurved Hospital.

Clinical sources: known case of common ano-rectal disorders

- 100 subjects on the basis of diagnosed condition like haemorrhoid, fistula in ano, fissure in ano were approached.
- A structured and validated questionnaire on the position of defecation was distributed and filled by the participants.
- Based on the questionnaire clinical assessment and statistical analysis was done.

**Inclusion Criteria**

Diagnosed patients of common Anorectal disorders, including

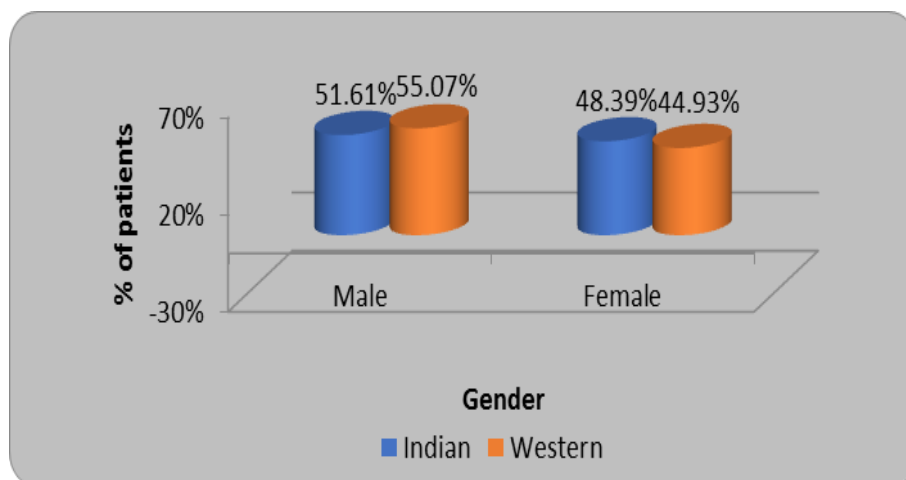
- Fissure-in-ano
- Haemorrhoids
- Fistula-in-ano
- Irrespective to age, sex, religion, occupation and economic status.

**Exclusion Criteria**

Patients other than above mentioned ano-rectal disorders will be excluded.

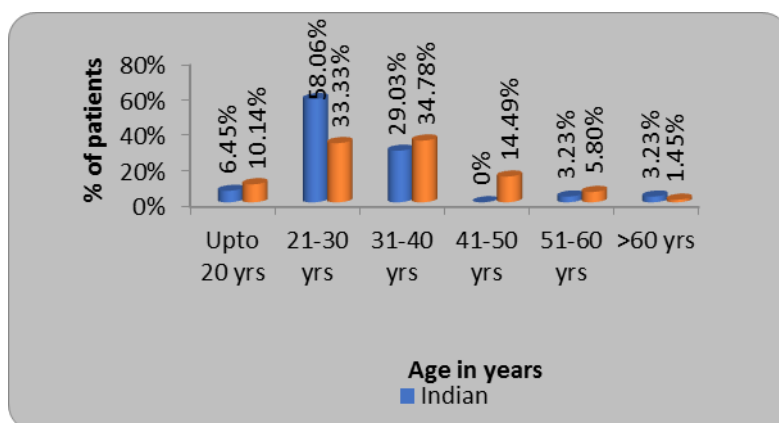
## OBSERVATION AND RESULT

### 1. Distribution of patients according to gender



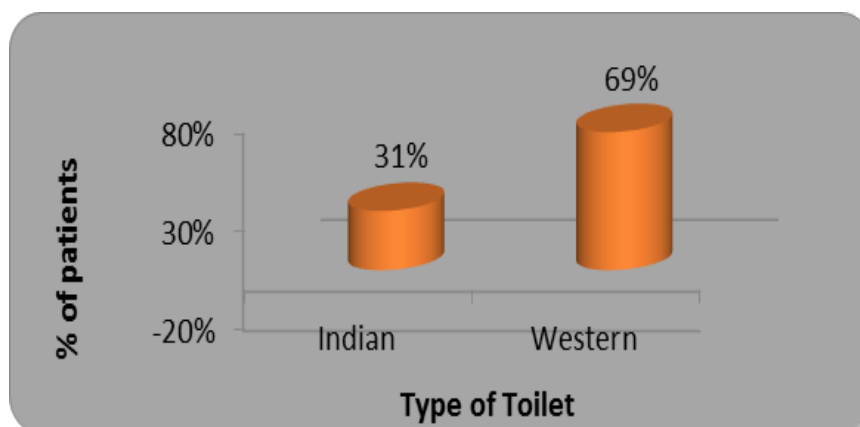
**Fig. No. 1: 51.61% of male uses Indian toilets & 55.07% of male uses Western toilets. 48.39% of female uses Indian toilet whereas 44.93% of female uses Western toilet.**

### 2. Distribution of patients according to age



**Fig. No. 2: 6.45% of subjects using Western toilet & 10.14 % of Western toilet belong to age upto 20 years. 58.06% of 21-30 years of subjects uses Indian toilet whereas 33.33% of subjects uses Western toilet. 29.03% of 31-40 years of subjects uses Indian toilet whereas 34.78% of subjects uses Western toilet. No any Indian toilet user from age group 41-50 whereas 14.49% from Western. 3.23% of subjects using Western toilet & 5.80 % of Western toilet belong to age 51-60 years. In More than 60 years subjects, 3.23 % were Indian toilet user & 1.45 % were Western toilet user.**

### 3. Distribution of patients according to type of toilet



**Fig. No. 3:** 31 % of total subjects uses Indian toilets while 69% of out of them uses Western toilets.

### 4. Distribution of patients according to duration of using toilet.

**Table No -1:** 16.13% of participants uses Indian toilets less than or equal to 10 years where as 81.16% participants were Western toilet users 83.87% of participants uses Indian toilets more than 10 years and 18.84 % participants uses Western toilets.

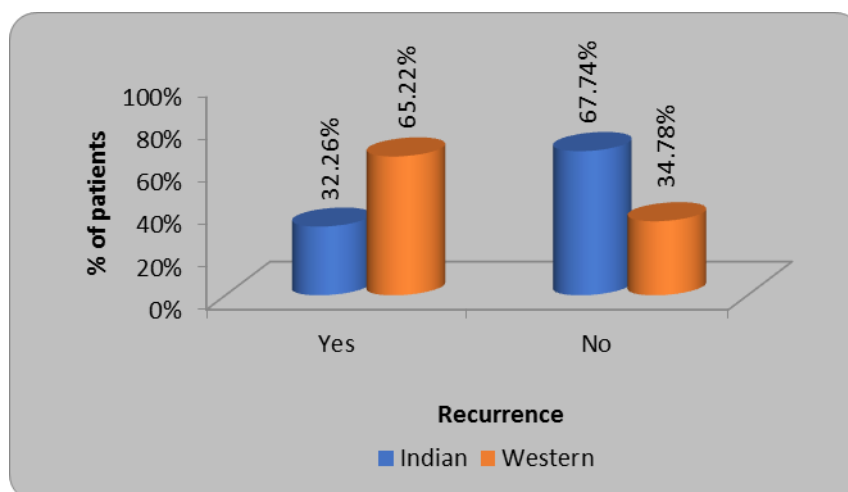
Duration of using toilet	Indian		Western		$\chi^2$ -value
	F	%	F	%	
$\leq 10$ yrs	5	16.13	56	81.16	38.02 p=0.0001, S
>10 yrs	26	83.87	13	18.84	
Total	31	100.00	69	100.00	

### 5. Distribution of patients according to diagnosis

**Table No 2:** 35.48% if Indian toilet user & 23.19% of Western toilet user have fistula in ano. 19.35% of Indian toilet user & 40.58% of Western toilet user have fissure in ano. 45.16% of Indian toilet user & 36.23% of Western toilet user have haemorrhoids.

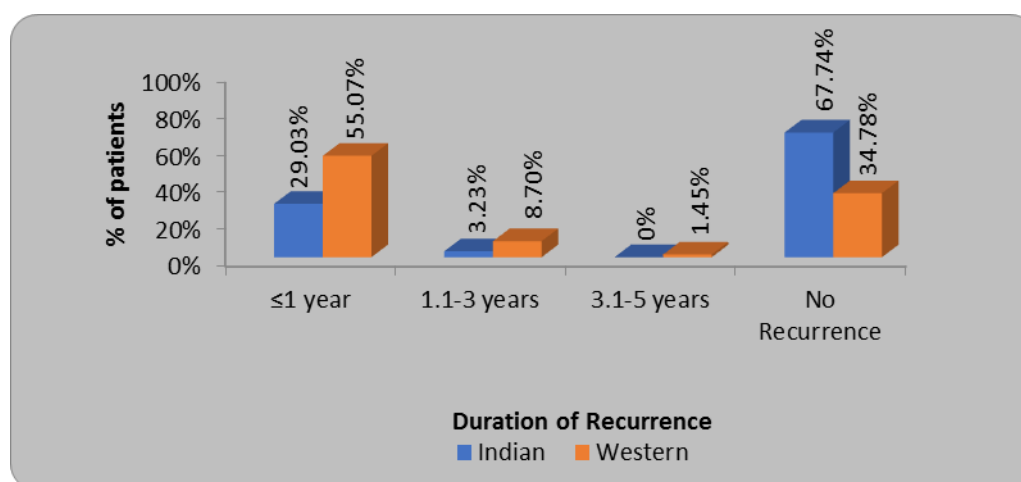
Diagnosis	Indian	Western	$\chi^2$ -value	p-value
Fistula in ANO	11(35.48%)	16(23.19%)	4.69	0.17, NS
Fissure in ANO	6(19.35%)	28(40.58%)		
Haemorrhoids	14(45.16%)	25(36.23%)		

## 6. Distribution of patients according to recurrence



**Fig. No. 4:** Anorectal disorder recurred in 32.26% of Indian toilet user & 65.22% of Western toilet user. 67.74% of Indian toilet user & 34.78% Western toilet user had no recurrence of Anorectal disorders.

## 7. Distribution of patients according to duration of recurrence



**Fig. No. 5:** Anorectal disorders recurred with a year in 29.03% of Indian toilet user & 55.07% of western toilet user. Anorectal disorders recurrence occurred in 1.1 to 3years duration 3.23%% of Indian toilet user & 8.70% of Western toilet user. Anorectal disorders recurred in 3.1 to 5years in zero % of Indian toilet user & 1.45% of Western toilet user. No recurrence found In 67.74% of Indian toilet user & 34.78% of Western toilet user.

## DISCUSSION

This research study was conducted to know that, is there any relationship between anorectal disorders and different positions of defecation viz. squatting and sitting. Incidence of

Anorectal cases were commonly seen in the age group of 21-30 years. In this group Anorectal cases are found to be very common because of their improper dietary habits, most of the participants belong to this age group were students. Males are found to be more affected by the Anorectal disorders in both Indian toilet user and Western toilet user because of their strenuous jobs and faulty dietary habits. Maximum number of subjects were found to be using Western toilet, this may be because today's lifestyle is more full of modernization and ease and people are quite comfort lovers. It was found that duration of Western toilet users is less than 10 years while Indian toilets user duration of using that toilet was more than 10 years. It can be concluded that though duration of Indian toilets users is more than 10 years but anorectal disorder is less among them. It was found that maximum number of subjects having anorectal disorders are the Western toilet users. This may be because, greater the hip flexion achieved by squatting the straighter the rectoanal canal will be & accordingly less strain will be required for defecation. Hence less number of subjects found having anorectal disorder in Indian toilet user. It was found that recurrence of anorectal disorders in Western toilet user was more while its reoccurrence rate in Indian toilet user is less. This suggests that squatting position in Indian toilet is more healthier as compared to sitting position in Western toilets.

## CONCLUSION

The present study was conducted in order to find that is there any relationship between anorectal disorders and different positions of defecation viz. squatting and sitting. It was found that maximum number of subjects were the Western toilets users and the anorectal diseases were found to be more common in them. Maximum number of subjects were having mixed dietary habit which had taken Conservative treatment. Recurrence rate of anorectal disorder in Western toilet users was more as compared to Indian toilet user. On comparing sitting position in Western toilet & squatting position in Indian toilet it was found that squatting position in Indian toilet is more healthier than sitting in Western toilet. This may be because sitting defecation posture necessitates excessive expulsive effort compared to the squatting posture, while squatting straightens the kink and allows for a more complete elimination. This reduces the risk of anorectal disorders.

## LIMITATION

- It is short term project.
- Sample size was less.

## RECOMMENDATION

The study should be conducted with more sample size.

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