

Prevalence and the Risk Factors of Haemorrhoids among the Patients Attending Tertiary Care Hospital of Bhuj, Kutch: A Cross-Sectional Study

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Abstract

Background: Haemorrhoids are abnormal engorgement of arteriovenous plexus in anal cushions lining the anal canal. As per the theory of sliding anal canal lining, weakening of supporting tissues of anal cushions lead to blood vessel descent. Present study was carried out to study the surgical profile of patients with hemorrhoidectomy so that we can throw a light on the etiopathogenesis of the patients with hemorrhoidectomy. **Subjects and Methods:** Present cross-sectional study was carried out at a tertiary care hospital of Bhuj in the department of general surgery among 200 patients who presented with symptoms suggestive of hemorrhoids. Information on socio demographic variables, types and degrees of haemorrhoids, age at diagnosis, risk factors, clinical manifestations, associated co-morbidities, methods used for diagnosis, management practices, and outcome of management was noted down by the investigators. Dietary history was taken they were classified as having vegetarian diet or mixed diet based on the answers given by them. **Results:** The incidence of hemorrhoids was more in upper class compared to the lower class where only 46% were found to be affected. But statistically the difference might not be significant. Incidence of hemorrhoids was less i.e. 24% among those who took only vegetarian diet compared to 76% among those who took mixed diet. Bleeding was present in the majority i.e. 95% of the patients followed by constipation in 90% of the cases which was followed by pain in the anal region in 86% of the cases and prolapse was seen in 84% of the cases. **Conclusion:** Haemorrhoids are one of the common diseases observed in patients below 40 years of age, especially if they are under stress. Proper diet, which is inclusive of adequate quantities of fibre as well as with less spice, is essential to prevent this disease.

Keywords: Bleeding, Cross-sectional study, Diet, Haemorrhoids

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Introduction

Haemorrhoids are abnormal engorgement of arteriovenous plexus in anal cushions lining the anal canal. As per the theory of sliding anal canal lining, weakening of supporting tissues of anal cushions lead to blood vessel descent.

Even though a common condition in clinical practice; its true prevalence is unknown due to the embarrassment involved in seeking treatment among the affected. Haemorrhoids is estimated to affect about a third of the population.^[1] More than half of men and women above 50 years of age are at risk of developing haemorrhoid symptoms during their lifetime.^[2] More than the men and women aged 50 years will experience hemorrhoid symptoms at least once during their lifetime.^[3] However, there have been incidences where

children and the elderly have also been diagnosed with this condition.^[4,5] Hemorrhoid disease is said to be the fourth leading outpatient gastrointestinal diagnosis, accounting for 3.3 million ambulatory care visits in the United States.^[6] Although so common, only around 4% seek medical help.^[7]

Near anus and near rectum, there is swelling of the blood vessels which leads to the occurrence of the hemorrhoids. The veins which commonly get affected and which can lead to hemorrhoids are usually seen in the lower part of the anus and rectum. Due to swelling, the walls of these veins get stretched, it becomes thin, and due to regular passage of the hard stools, give rise to hemorrhoids. It has been commonly said that almost everyone may get affected due to hemorrhoids.^[8]

The actual cause of hemorrhoids remains unknown.^[9] But it is proposed to be caused by temperament, body habits, cus-

toms, passions, sedentary life, tight-laced clothes, climate.^[10] Patients with spinal cord injuries constipation, chronic diarrhea, poor bathroom habits, postponing bowel movements, and a poor-fiber diet are also considered to be contributing causes.^[11] Other causes that have been attributed to this condition are genetic predisposition, increased intra-abdominal pressure from many causes, including prolonged forceful valsalva defecation, obstruction of venous outflow secondary to pregnancy, and constipated stool in the rectal ampulla.^[12,13]

Present study was carried out to study the surgical profile of patients with hemorrhoidectomy so that we can throw a light on the etiopathogenesis of the patients with hemorrhoidectomy.

Subjects and Methods

Present study was hospital based cross sectional study. It was carried out at a tertiary care hospital of Bhuj in the department of general surgery among 200 patients who presented with symptoms suggestive of hemorrhoids during the study period from January 2019 to September 2019. Institutional Ethics Committee permission was taken after presenting the proposal for the present study. After the clearance from the Institutional Ethics Committee consent form was created as per Institutional Ethics Committee norms. Written consent from each and every patient willing to participate in the present study was taken.

Inclusion criteria were patients with confirmed diagnosis of haemorrhoids; age 35-70 years. Exclusion criteria were haemorrhoids patients but having other serious co-morbidities; bed ridden patients; not willing to be part of this study. Study questionnaire was prepared for the present study and then it was tested and approved by all authors involved in the present study. Thus the data was collected in the pre designed, pre tested, and semi structured study questionnaire.

Information on socio demographic variables, types and degrees of haemorrhoids, age at diagnosis, risk factors, clinical manifestations, associated co-morbidities, methods used for diagnosis, management practices, and outcome of management was noted down by the investigators. Dietary history was taken they were classified as having vegetarian diet or mixed diet based on the answers given by them. Patients with symptoms were asked as to since what time they were having the symptoms. Then we classified them into those having symptoms since less than one year and having symptoms with more than one year of duration. The anorectal examination was carried out for each and every patient included in the present study. The hemorrhoids were examined thoroughly and classified into different grades. Symptoms of the patients were also noted in the chronological orders and recorded in the study questionnaire. Presence of fissure or peri anal skin tag was confirmed for each and every patient included in the present study.

Statistical analysis

The recorded data was compiled and entered in a spreadsheet computer program (Microsoft Excel 2007) and then exported to data editor page of SPSS version 15 (SPSS Inc., Chicago, Illinois, USA). Descriptive statistics included computation of percentages, means and standard deviations. For all tests, confidence level and level of significance were set at 95% and 5% respectively.

Results

Majority of the patients 42% were in the age group of 31- 40 years followed by 31% in the age group of 41-50 years. [Table 1]. The number affected by hemorrhoids was more in males i.e. 57.5% compared to 42.5% for females. Thus the incidence of hemorrhoids is more in males compared to females [Table 2].

The incidence of hemorrhoids was more in upper class compared to the lower class where only 46% were found to be affected. But statistically the difference might not be significant.

Incidence of hemorrhoids was less i.e. 24% among those who took only vegetarian diet compared to 76% among those who took mixed diet i.e. vegetarian as well as non-vegetarian diet. Thus non vegetarian diet can predispose a person to the risk of haemorrhoids [Table 3]. 60.5% of the patients had third grade of hemorrhoids compared to 39.5% of the patients with fourth grade hemorrhoids. No patient had first or second grade of hemorrhoids [Table 4]. Bleeding was present in the majority i.e. 95% of the patients followed by constipation in 90% of the cases which was followed by pain in the anal region in 86% of the cases and prolapse was seen in 84% of the cases. One patient had more than one symptoms complex [Table 5]. On anorectal examination, it was found that 42% of the patients had fissure and 24% of the patients had peri anal skin tag. Anorectal examination was within normal limits in 35% of the cases.

Table 1: Age wise distribution in study group.

Age Group in years	Number	Percentage (%)
31-40	84	42
41-50	62	31
51-60	30	15
61-70	24	12
Total	200	100

Table 2: Gender wise distribution of Study Participants

Gender	Number	Percentage (%)
Male	115	57.5
Female	85	42.5
Total	200	100

Table 3: Distribution of study population as per dietary pattern

Diet	Number	Percentage (%)
Vegetarian	48	24
Mixed	152	76
Total	200	100

Table 4: Distribution of study population as per grading of haemorrhoids

Grades	Number	Percentage (%)
Third grade	121	60.5
Fourth grade	79	39.5
Total	200	100

Table 5: Distribution of study population as per grading of haemorrhoids

Grades	Number	Percentage (%)
Bleeding	190	95
Constipation	180	90
Pain	170	85
Prolapse	172	86

Discussion

Hemorrhoids or piles are one of the most common disorders seen among the young adults. It is estimated that more than 50% of the males and females would suffer from piles before they are of 50 years of age. The age range of this study was 35-68 years. In this study the most common age group was 35-45 with 41% cases distributed in this group. Next most common age group was 46-55 age groups. Mean age was 47±3.2 years. This was similar to the findings of previous studies where majority of cases were between 45 and 49 years or ≥40 years. [14,15] However, majority of cases were reported between 20-39 years in a study done in Mysore, India, [16] between 20-49 years in a study done in Taiwan [17] and between 51-70 years in a study done in Bhubaneswar, India. [17]

In this study out of total 41 cases, 51% in open method belonged to 35-45 age group while in stapler group 41% belonged to age group of 35-45. Sachin et al concluded similar results with 26% were in the age group 21-30 years in the open hemorrhoidectomy group, 28% were in the age group 21-30

years, and 26% were in the age group 31-40 years in stapler method. [18]

Out of total cases, male formed 56% and rest 44% formed by females, there is no any significant association of gender distribution in two surgical groups, also there is no any significance between age groups and gender distribution in study groups. The proportion of males outnumbered the proportion of females in this study as also reported in several other studies. [15,16,19] The reason for this could be that women hesitate more than men to discuss anorectal problems and also tend to avoid anal examination for the diagnosis of haemorrhoids. Gravie et al also concluded no significant differences between the 2 groups with respect to gender. [20] Sachin et al also supported our higher male findings. [18] All these findings were similar with our study findings. Out of total male 46% male were in open group and 54% were in stapler group. While out of total females 54% female were in open group and 46% were in stapler group. This association was not found to be significant. This was in accordance with Thejeswi et al study in which out of 20 stapled group cases, 14 (70%) were males and 6 (30%) were females.

With 79% study subjects having mixed diet which is found to be associated significantly. This was in accordance to a study by Khan et al, who reported that out of 311 patients in his study, only 66 were on vegetarian diet. [20] Inadequate fibre intake was found to be one of the risk factors of hemorrhoids as was high intake of spicy food. [21,22] Increasing the dietary fiber was reported to improve the incidence of hemorrhoids. This is probably as fibre reduced constipation, which is one of the risk factors of hemorrhoids. [23]

Hemorrhoid grade is not found to be significant in study population, with grade III forming 54% and grade IV forming 46% of total cases as also reported in a Pakistani study where 84.2% cases were of third degree variety. [24] In a study by Khan et al majority 53.3% of patients had third degree haemorrhoids. [16] In this study bleeding 98% was found to be most common symptom, next was constipation 89% in study population. These are not found to be significantly distributed in either of the two groups. As these haemorrhoids prolapse through the anal canal, the tissue can become traumatised and friable, leading to bleeding. [25]

In study done in USA, constipation was associated with an increased prevalence of haemorrhoids. [26] A multivariate analysis identified constipation and straining during delivery for more than 20 minutes as significant predictors of haemorrhoids. [27] This is explained by the fact that constipation increases the intra-abdominal pressure. This might induce obstruction in venous return and later engorgement of haemorrhoidal plexus. Passage of hard stools increases shearing force on anal cushions which also predisposes to haemorrhoids. Out of total 100 cases 67 showed additional findings, fissure in 44 cases and 23 showed perianal skin tag. There was no signifi-

cance in distribution of these cases in surgical groups. Maurya et al study out of total anorectal findings 65% had a fissure and 35% had fistula, they also did not find any significance in two study groups.^[28] While Chauhan et al study showed only 5% cases with anal fissures.^[29]

The limitation in this study was the less number of study subjects. Larger sample size is required to assess the etiology of hemorrhoids.

Conclusion

Haemorrhoids are one of the common diseases observed in patients below 40 years of age, especially if they are under stress. Proper diet, which is inclusive of adequate quantities of fibre as well as with less spice, is essential to prevent this disease. Thus, proper education must be done to such patients to change their lifestyle so that they can take proper precautions and avoid unnecessary complication.

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