

## Original Research Article

# Prevalence and risk factors of hemorrhoids: a study in a semi-urban centre

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### ABSTRACT

**Background:** Hemorrhoids, also called piles are masses or clumps of tissues which consist of muscle and elastic fibers with enlarged, bulging blood vessels and surrounding supporting tissues present in the anal canal of an individual. This condition is a common ailment among the adults. The actual burden of the disease remains unknown. Hence author had undertaken this study to assess the incidence and the risk factors of this disease among the patients in the area.

**Methods:** Sixty three patients between the ages 20 and 80 who had come to the outpatient ward with hemorrhoids were included into the study. The demographic details from all the patients were noted. Their dietary habits, bowel habits, amount of physical activity, smoking and alcohol use as well as over the counter medication use were noted in detail.

**Results:** Out of the 63 patients under study, 66.67% were males and 33.33% were females, with the most common age group affected was below 40 years of age. Less than 40% of the patients were vegetarians, with more than half of the patients having a mixed diet. More number of women history of hemorrhoids in their family (47.6%), while the history in the males was only 26.2%. Straining and constipation was seen in majority of the patients while many of them also had chronic cough. Bleeding and mass through the rectum was seen in majority of the patients (96.8% and 93.7% respectively) while 76.2% of them had pain during defecation. Few of the patients (33.3%) soiled their clothes.

**Conclusions:** Hemorrhoids 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.

### INTRODUCTION

Hemorrhoids, also called piles are masses or clumps of tissues which consist of muscle and elastic fibers with enlarged, bulging blood vessels and surrounding supporting tissues present in the anal canal of an individual. It is a condition characterized by the prolapsed of an anal cushion that may result in bleeding and pain.<sup>1,2</sup> This condition is a common ailment among the adults. More than the men and women aged 50 years will experience hemorrhoid symptoms at least once

during their lifetime.<sup>3</sup> However, there have been incidences where children and the elderly have also been diagnosed with this condition.<sup>4,5</sup> Hemorrhoid disease is said to be the fourth leading outpatient gastrointestinal diagnosis, accounting for 3.3 million ambulatory care visits in the United States.<sup>6</sup> Although so common, only around 4% seek medical help.<sup>7</sup>

They are classified as 'internal' or 'external' by where they are located in relationship to the pectinate line, the dividing point between the upper 2/3 and lower 1/3 of the

anus. Internal hemorrhoids are located above the pectinate line and are covered with cells that are the same as those that line the rest of the intestines. External hemorrhoids arise below the line and are covered with cells that resemble skin. Hemorrhoids become an issue only when they begin to swell, causing itching, pain and/or bleeding. Internal hemorrhoids or true hemorrhoids are further graded based on the extent to which the tissue descends in to the anal canal.

In grade I hemorrhoids the mucosa barely prolapses, however, with severe straining, they may be trapped by the closing of the anal sphincter. Subsequently, venous congestion occurs occasionally, resulting in discomfort and/or bleeding. Grade II hemorrhoids are further protruded in the mucosa, and thus the patient complains of an obvious lump, but this disappears spontaneously and rapidly after defecation unless thrombosis occurs. Grade III hemorrhoids are seen in chronic hemorrhoidal disease, where the persistent prolapsing produces dilatation of the anal sphincter, and the hemorrhoids protrude with minimal provocation and usually require manual replacement. In case of grade IV hemorrhoids, these are usually external and are protruding all the time unless the patient replaces them, lies down, or elevates the foot of the bed. In these fourth degree hemorrhoids, the dentate line also distends, and there is a variable external component consisting of redundant, permanent perianal skin.<sup>8</sup>

The actual cause of hemorrhoids remains unknown.<sup>9</sup> But it is proposed to be caused by temperament, body habits, customs, passions, sedentary life, tight-laced clothes, climate.<sup>10</sup> 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.<sup>11</sup> 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.<sup>12,13</sup> Increased body mass index is also considered to be one of the contributing factor.

Although the treatment for hemorrhoids is usually surgery and endoscopic therapy for the symptomatic hemorrhoids, most patients are thought to self-treat with over-the-counter therapy. As a result, the actual burden of the disease remains unknown.<sup>14</sup> Hence author had undertaken this study to assess the incidence and the risk factors of this disease among the patients in the area.

**METHODS**

This retrospective study was conducted by the Department of Surgery in Viswabarathi Medical College over a period of Two years i.e. August 2015 to September 2017. 63 patients between the ages 20 and 80 who had come to the outpatient ward with hemorrhoids were

included into the study. The demographic details from all the patients were noted. Their dietary habits, bowel habits, amount of physical activity, smoking and alcohol use as well as over the counter medication use were noted in detail.

Bowel movement frequency was assessed by finding how many movement a patient has in a day or per week. Further, the percent of time the person had to strain during the bowel movement, had a feeling of incomplete bowel evacuation, or had hard or lumpy stools was also enquired and noted.

Physical activity was measured using the international physical activity questionnaire, and summarized as metabolic equivalents.<sup>15</sup> The time the person was sting during the day on week days was noted to assess the sedentary life style. Use of NSAIDS in the number of days per week was also noted. Smoking habits of the patient was also assessed and categorized as never, former or current users. Similar was done for alcoholic drinks as number of drinks per day in the previous year.

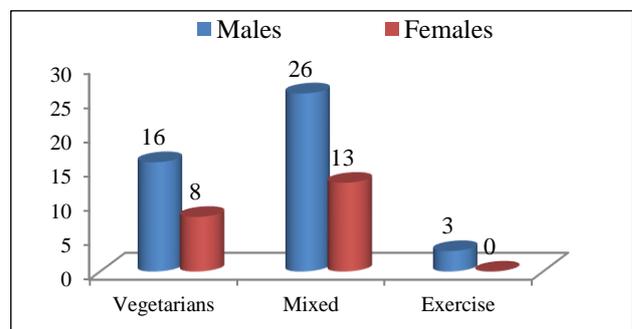
Means and standard deviation were plotted and comparison of 2 parameters was done using student t-test.

**RESULTS**

Out of the 63 patients under study, 42 (66.67%) were males and 21 (33.33%) were females. The most common age group affected was with hemorrhoids was below 40 years of age (Table 1).

**Table 1: Age and gender wise distribution of patients with hemorrhoids.**

Age	Males	Females	Total
20-40 years	19 (45.2%)	9 (42.9%)	28 (44.4%)
41-60 years	14 (33.3%)	8 (38.1%)	22 (34.9%)
>60 years	9 (21.4%)	4 (19.1%)	13 (20.6%)
Total	42 (66.7%)	21 (33.3%)	63



**Figure 1: Life style of patients.**

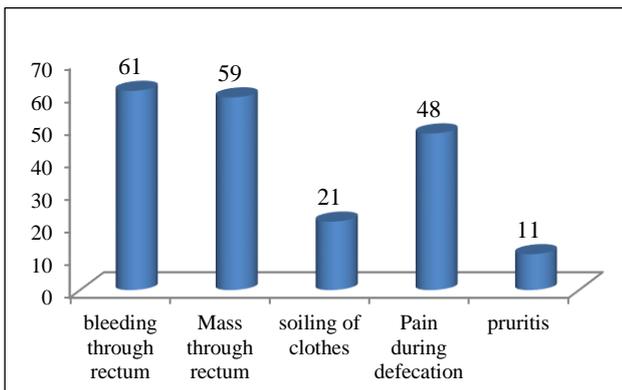
Less than 40% of the patients were vegetarians, with more than half of the patients having a mixed diet. Very few patients did exercise on a regular basis (Figure 1).

More number of women history of hemorrhoids in their family (47.6%), while the history in the males was only 26.2%. Most of the men had an educational background of at least till high school while most of the women were uneducated. Straining and constipation was seen in majority of the patients while many of them also had chronic cough (Table 2).

**Table 2: Incidence of haemorrhoids.**

Incidence	Male	Females
Familial history	11 (26.2%)	10 (47.6%)
Educational background		
Uneducated	7 (16.7%)	14 (66.7%)
Primary	13 (31%)	4 (19%)
High	17 (40.5%)	3 (14.3%)
High school	5 (11.9%)	0
Constipation	35 (83.3%)	19 (90.5%)
Chronic cough	18 (42.9%)	9 (42.9%)
Straining	33 (78.6%)	16 (76.2%)

Bleeding and mass through the rectum was seen in majority of the patients (96.8% and 93.7% respectively) while 76.2% of them had pain during defecation. Few of the patients (33.3%) soiled their clothes (Figure 2).



**Figure 2: Clinical manifestations among the hemorrhoid patients.**

**DISCUSSION**

Hemorrhoids or piles is 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.

In the present study, there was a preponderance of males (66.7%) compared to the females (33.3%). A 55% male predominance was seen in a study by Asif Ali et al, while Khan et al also showed similar results.<sup>16,17</sup> However in other studies, no significant difference was found in the two sexes.<sup>18,19</sup>

The most common age group affected with hemorrhoids was below 40 years of age. This was in concordance to the study by Ali et al, where the most common age group

was 20-39 years. A slightly higher age prevalence was reported by Pigot et al.<sup>20</sup> This was contradicted in a study by Khan et al, who observed that patients above 40 years of age were more at risk than those below.

Most of the patients had a mixed diet, with only few of them being pure vegetarians. 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.<sup>17</sup> Inadequate fibre intake was found to be one of the risk factors of hemorrhoids as was high intake of spicy food.<sup>21,22</sup> Increasing the dietary fibre was reported to improve the incidence of hemorrhoids. This is probably as fibre reduced constipation, which is one of the risk factors of hemorrhoids.<sup>23</sup> In the present study, author also found constipation to be one of the risk factors which was in accordance to other studies.<sup>16,19,24</sup> Straining during defecation was also found to be one of the risk factors which eventually resulted in complications such as bleeding through rectum, mass emerging through rectum as well as prolapse, which was also observed in present study.<sup>16</sup>

Sedentary life style was also one of the risk factors of piles, which was corroborated by Khan et al in his study and he also mentioned lifting weights to be a risk factor.<sup>17</sup> However, this aspect was not assessed in the present study.

Although in present study, there was no significance in the presence of hemorrhoids associated with education of the patients, in a study by Ali et al, this disorder seemed to be associated with the extent of stress.<sup>16</sup>

The most common complication of present study was bleeding through the rectum followed by passage of mass. Soiling of clothes, pain during defecation and pruritis were other manifestations, which was similar to the results observed by Ali et al in his study.

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

**CONCLUSION**

Hemorrhoids 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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