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A RETROSPECTIVE STUDY ON PREVALENCE, RISK FACTORS, CLINICAL PRESENTATION AND MANAGEMENT OF HAEMORRHOIDS

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ABSTRACT

Background: Haemorrhoids are among the most common benign anorectal disorders, typically resulting from the abnormal downward displacement of anal cushions. Characterized by symptoms such as rectal bleeding, prolapse, pain during defecation, and pruritus ani, they significantly affect quality of life. Despite their high prevalence, the true burden of the disease is difficult to estimate due to underreporting and social stigma, especially in developing countries like India. This study aimed to evaluate the prevalence and associated risk factors of haemorrhoids in patients admitted to a surgical unit in a tertiary care center.

Methods: This was a retrospective study conducted in the Department of Surgery at NIUM Hospital, affiliated with Rajiv Gandhi University of Health Sciences, Bangalore. Data were collected from medical records of 157 patients diagnosed with haemorrhoids. Inclusion criteria involved patients aged 10–80 years, while those with haemorrhoids secondary to anorectal tumors or under 10 years of age were excluded. Patient demographics, symptoms, dietary habits, BMI, and haemorrhoid grading were analyzed using standard statistical methods.

Results: The study revealed a higher prevalence of haemorrhoids among males (66.87%) compared to females (33.13%). The most affected age group was 40–60 years. Key symptoms included passage of hard stools (91.71%), pain during defecation (68.78%), and rectal bleeding (62.42%). A majority of patients had mixed diets (89.81%), and most fell within a normal BMI range. External haemorrhoids were the most common type (38.85%), followed by interno-external (36.94%) and internal haemorrhoids (24.20%). Risk factors identified included chronic constipation, low fibre intake, spicy diet, inadequate hydration, sedentary lifestyle, and obesity.

Conclusion: Haemorrhoids are prevalent in the adult population, particularly in middle-aged males, and are strongly associated with modifiable lifestyle factors such as poor diet and physical inactivity. Early identification of risk factors and promoting awareness regarding dietary changes, hydration, and regular physical activity can aid in prevention and reduce the disease burden.

No. of Pages: 6 **Nos. of Table: 8** **References: 14**

Keywords: Haemorrhoids, constipation, dietary habits, prevalence, risk factors, anorectal disorders, lifestyle, surgical management.

INTRODUCTION

One of the most prevalent benign anorectal disorders is hemorrhoidal disease, which is characterized by the expansion and aberrant downward movement of anal cushions, which results in prolapse and venous dilatation. It is a major source of lower gastrointestinal bleeding and has a substantial impact on patient's quality of life. The dentate line's location determines whether it is categorized as internal or external [1]. Haemorrhoids, also known as piles, are masses or clusters of tissues found in an individual's anal canal that are made up of muscle and elastic fibers, swollen,

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protruding blood vessels, and surrounding supporting tissues. It is a disorder where an anal cushion prolapses, which can cause pain and bleeding [2]. Despite being a prevalent disorder in clinical practice, its actual incidence is unknown because of the stigma associated with seeking treatment. It is estimated that around one-third of the population suffers from haemorrhoids.

Approximately 50% of men and women in their fifties are susceptible to experiencing haemorrhoids at some point in their lives. Academia Journal of Surgery Volume 3 Issue 1 January–June 2020, even though has seen instances in which this illness has also been detected in children and the elderly. [3] According to estimates, 40 million Indians suffer from hemorrhoids. Increasing age, being overweight or obese, psychological issues, having a history of chronic constipation, pregnancy, eating a diet low in fiber, eating spicy foods, drinking alcohol, and other factors are regarded to be risk factors for piles. [4] Rectal bleeding is the most typical sign of hemorrhoidal illness. It typically occurs after bowel movements and is characterized by the passage of little amounts of bright red fresh blood; the color is caused by direct arteriovenous communication that occurs within the hemorrhoidal cushion.[5] Depending on where they occur, haemorrhoids are classified as internal or external. The demarcation line between external and internal haemorrhoids is the pectinate or dentate line that separates the upper two thirds and lower one third of the anus. Below this line are external haemorrhoids, which are covered by skin. Internal haemorrhoids are found above the pectinate line and are coated in mucosa.

Positioned at 3, 7, and 11 o'clock, internal haemorrhoids are true haemorrhoids that vary in degree based on the level of protrusion out of the anal canal. Banov et al.'s classification of internal haemorrhoids commonly divides them into four degrees: first, second, third, and fourth.[6] The mucosa in grade I haemorrhoids hardly prolapses, but under extreme straining, the anal sphincter may close and retain them. Following that, sometimes, venous congestion happens, which causes pain and/or bleeding. Grade II haemorrhoids protrude more into the mucosa, leading to the patient feeling a noticeable lump. This lump typically vanishes on its own soon after defecation, unless thrombosis occurs. Grade III haemorrhoids are found in chronic hemorrhoidal disease, where continuous prolapse leads to dilation of the anal sphincter. These haemorrhoids protrude with little provocation and generally need to be manually pushed back into place. Grade IV haemorrhoids are usually external and stay protruded continuously, unless the patient manually adjusts them, lies down, or elevates the bed's foot. These haemorrhoids cause distension of the dentate line, and there is often a varying external component of excess, permanent perianal skin. [7]

The main cause of haemorrhoids is an increase in pressure on the rectum and anal veins. A major contributing factor to their development is chronic constipation and the straining that occurs during bowel motions, which is frequently caused by constipation. Another significant risk factor is pregnancy because of the pressure on the pelvic veins caused by the expanding uterus and hormonal changes. Individuals who are obese are also more susceptible to haemorrhoids because obesity raises intra-abdominal pressure. Hemorrhoidal development becomes more likely as people age because the anal veins' supporting tissues deteriorate. Prolonged sitting combined with a sedentary lifestyle reduces circulation and increases pressure on the pelvic veins. Moreover, constipation from a low-fibre diet exacerbates straining during bowel movements. Increased abdominal pressure has been associated with physical strain, such as heavy lifting, and heredity, with family history being a major risk factor. Many people develop haemorrhoids as a result of these many factors.[8,9] While endoscopic treatments and surgery are typically used to treat haemorrhoids, most people are believed to self-treat with over-the-counter medications. Therefore, it is impossible to determine the true burden of the disease. In order to determine the prevalence and risk factors of this condition among patients in the region, the author conducted this study. [7]

MATERIALS METHODS

A. Place of study: Department of Surgery, NIUM Hospital associated with Rajiv Gandhi University of Health Sciences (RGUHS), Bangalore (KARNATAKA).

B. Type of study: Retrospective study

C. Sampling Method: Consecutive

D. Sample Collection: Data for the study were gathered from the medical record department of 157 patients diagnosed with haemorrhoids. Relevant patient details, including age, sex, socioeconomic status, symptoms, and risk factors, were recorded

using a detailed proforma. The diagnosis was made based on a thorough history, clinical examination, per rectal examination, and proctoscopy. Conservative and topical management were used for haemorrhoids with less severe symptoms, while surgical intervention like haemorrhoidectomy was performed under spinal anaesthesia for internal and external haemorrhoids.

E. Inclusion Criteria: Patients aged 10 to 80 years with haemorrhoids admitted to the surgery ward were included.

F. Exclusion Criteria: Patients with haemorrhoids secondary to anorectal tumours or those less than 10 years old were excluded.

G. Statistical Methods: Results were shown in tables, comparing their numbers and percentages by scientific calculator and standard appropriate statistical formula.

RESULTS:

This study sought to explain the demographic information and risk factors related to haemorrhoids by analyzing statistics in haemorrhoid patients. The following observations and findings were acquired from the department's medical records of haemorrhoid patients admitted to surgical wards were analyzed.

Table 1: Age wise distribution.

Age group (years)	Total admission	%
18—39 Yrs	62	39.5
40—60 Yrs	78	49.6
More than 60 Yrs	17	10.9

Age – Highest number of patients belongs to the young age group of 20-40 years.

Table 2: Sex Wise Distribution.

	Total admission	%
MALE	105	66.87
FEMALE	52	33.13
	157	

Table 3: Symptoms

Complaints	Number of patients	%
• Bleeding per rectum	98	62.42%
• Pain during defecation	108	68.78%
• Passing of hard stools	144	91.71%
• Pruritus ani	30	19.10%
• Prolapsed swelling	78	49.68%

Table 4: Distribution of study population as per duration of symptoms.

Duration in year	Number	Percentage (%)
Less than one year	103	
More than one year	54	
Total	**157**	

Table 5: Distribution of study population as per dietary pattern.

Diet	Number	Percentage (%)
Mixed	141	
Veg	16	
Total	**157**	

Table 6: As per the B.M.I.

14- 17.9	11
18- 24	128
25-30	9
More than 30	9

Table 7: Distribution of study population as per grading of haemorrhoids.

GRADES	NO.	PERCENTAGE
External Haemorrhoids	61	
Internal Haemorrhoids	38	
Interno-external Haemorrhoids	58	

Table 8: Management of haemorrhoids.

Conservative Management	**21**	**13.3%**
Operative Management	136	86.6%
Total	157	

Discussion

Haemorrhoids are a common anorectal condition that affects the majority of individuals by the age of 50. In our study, the age-wise distribution indicated that the most frequently affected group was individuals in the middle age range (41–60 years). This finding is somewhat consistent with the studies conducted by Ravindranath GG et al. and Ali SA et al., where the most affected group was those under 40 years of age. However, it contrasts with the results reported by Khan et al. and Johanson et al.[6] In terms of gender distribution, our study showed a male-to-female ratio of 2:1. Of the total 157 patients admitted, 66.87% were male and 33.13% were female. This disparity might be attributed to men being more likely to seek medical care for haemorrhoids, while women may experience hesitation or embarrassment when consulting for anorectal issues.

The analysis of symptoms in patients with haemorrhoids showed that the majority experienced multiple complaints simultaneously. The most frequently reported symptom was the passage of hard stools (91.71%), followed by painful defecation (68.78%), rectal bleeding (62.42%), prolapsed swelling (49.6%), and anal itching or pruritus ani (19.10%).

Haemorrhoids, also known as piles, are a common condition in adults, with over half of men and women aged 50 and above likely to experience symptoms during their lifetime. In the current study, a higher occurrence was seen among males, accounting for 66.8% of cases. This finding is consistent with the results reported by Khan et al. However, earlier studies by Has et al. and Johanson et al. suggested that the prevalence of haemorrhoids is nearly equal among both sexes. Our study also found that individuals aged between 40 and 60 years had the highest prevalence of the condition.[10]

Our study clearly indicates that the prevalence of

haemorrhoids is already significant by the age of 30. This supports the idea that the anchoring structures of the rectal mucosa weaken with age. The rate at which connective tissue deteriorates can vary among individuals and may have a genetic basis, as suggested by Brondel et al. Similar to how some people develop facial wrinkles or sagging skin earlier than others, haemorrhoids may also appear earlier in certain individuals. Ultimately, the weakening of the anal mucosa's support system is a natural part of aging, making haemorrhoids an eventual condition for most—though not everyone will experience symptoms. Environmental influences or other yet unidentified factors may also contribute to the development of haemorrhoids. [11] In our study, participants who experienced constipation were more likely to have haemorrhoids than those who did not. This finding is consistent with research from other studies that highlight the significant role constipation plays in the onset of haemorrhoids. The likely reason is that prolonged straining and the passage of hard stools can lead to the breakdown of the supportive tissue within the anal canal. This stress can damage the elastic fibers, resulting in the downward displacement of the anal cushions and ultimately leading to the formation of haemorrhoids.[12]

The evaluation of risk factors in our study indicates that the exact pathogenesis of haemorrhoids remains not fully understood. However, as noted by Kann et al., "all etiological and risk factors contribute to the stretching and slippage of hemorrhoidal tissue." When the supporting structures of the anal cushions weaken, these cushions may shift downward, leading to venous dilation and eventual prolapse.[13]In our findings, key risk factors associated with haemorrhoids included a low-fiber diet, mixed dietary habits, inadequate hydration, chronic constipation or diarrhoea, straining during bowel movements, low levels of physical activity, and obesity. An analysis of haemorrhoid prevalence across different BMI categories showed the highest occurrence within the mid-range BMI group, as detailed in the corresponding table.

The passage of hard stools increases the shearing force exerted on the anal cushions. However, recent studies have started to challenge the previously assumed strong link between constipation and the development of haemorrhoids. Several researchers have not found a significant correlation between the two, while some studies have even indicated that diarrhoea may be a contributing factor to haemorrhoid formation. [1]In our study, risk factors identified included low fibre consumption, high intake of spicy and non-vegetarian mixed diets, and inadequate hydration. Increasing dietary fibre, adopting a vegetarian and non-spicy diet, and maintaining proper hydration levels can help alleviate and prevent haemorrhoids by reducing constipation—a commonly recognized factor in the condition's development.

In our study, the types of haemorrhoids were assessed through clinical examination and diagnosis of each patient. The majority of admitted cases involved external or combined internal-external haemorrhoids, most of which required surgical intervention. A smaller number of patients were hospitalized for conservative, non-surgical treatment. Management strategies were determined based on the type of haemorrhoid diagnosed, with two primary approaches utilized: open haemorrhoidectomy and conservative management.

In our study, two main treatment approaches were employed depending on the severity of the haemorrhoids: haemorrhoidectomy and conservative management. Surgical intervention was typically considered when conservative treatments failed or complications arose. The most commonly performed procedure in this study was open haemorrhoidectomy. Excisional haemorrhoidectomy remains the most effective treatment method, offering the lowest recurrence rates compared to other treatment options. According to a recent meta-analysis comparing outcomes of stapled haemorrhoidopexy and traditional haemorrhoidectomy, stapled haemorrhoidopexy was found to result in less postoperative pain, quicker return of bowel function, shorter hospital stays, faster resumption of daily activities, improved wound healing, and greater patient satisfaction.[6] This study provides valuable insight into the burden and potential risk factors associated with haemorrhoids, which can aid in identifying individuals at risk and promoting early diagnosis, preventive strategies, and timely interventions. In Indian society, haemorrhoids and other anorectal conditions often carry a social stigma, leading many affected individuals to overlook or hide their symptoms. As a result, although the estimated prevalence in India ranges between 32–40%, accurate data on the true extent of the condition remains limited.[14]

Conclusion

Symptomatic haemorrhoids are a common benign condition often seen in individuals with risk factors

such as chronic constipation, poor dietary habits, lack of physical activity, and obesity. Therefore, it is important to educate patients about adopting healthier dietary habits, increasing physical activity, and preventing constipation.

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