ORIGINAL RESEARCH PAPER
Volume - 14 | Issue - 07 | July - 2025 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

TO STUDY THE PREVALENCE AND RISK FACTORS OF HEMORRHOIDS IN TERTIARY CARE CENTER

General Surgery

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ABSTRACT

Aim: The study aims to recognize the incidence and risk factors of hemorrhoids among patients in a tertiary care center. **Methods:** The demographic details from all the patients were noted. Their dietary habits, bowel habits, amount of physical activity, smoking and alcohol use were noted in detail. **Results:** The age group above 40 years (72.45%), male gender (65.6%), low educational level (52.48%), lower socioeconomic status (66.75%), family history of hemorrhoids (59.34%), constipation (79.89%), longer duration of stay in the toilet for evacuation (62.25%), chronic cough (55.65%) majorly promotes the risk of development of hemorrhoids. In addition major factors were: no daily consumption of fresh fruits and vegetables, daily intake of spicy foods, inadequate intake of water, sedentary lifestyles, and high body mass index. **Conclusion:** Healthcare providers should increase the information of people regarding the risk factors that prone people to hemorrhoids. By educating the public about the risk factors of hemorrhoids and their preventive techniques, hemorrhoids incidence could be brought down.

KEYWORDS

hemorrhoids, risk factors, prevalence, constipation, straining

INTRODUCTION

Hemorrhoid sickness are among one of the most prevalent conditions in the surgical outpatient department. Hemorrhoid illness has been documented over millennia of history. They are a substantial medical and economic concern impacting millions globally [1]. Hemorrhoids are generally classified as either internal or external according to their location. [2,3]. External hemorrhoids come from the external hemorrhoidal plexus, whereas internal ones come from the internal one. The dentate line separates the internal and external hemorrhoid plexus [4, 5].

Hemorrhoids can cause rectal bleeding, a prolapsing lesion, anal pain, irritation, and soiling. Since these symptoms are not exclusive to hemorrhoidal disease, many other diagnosis must be examined to rule out more serious sickness. After eliminating out other causes, hemorrhoids often cause a patient's symptoms [6]. The most common and severe consequences of hemorrhoids are perianal thrombosis and incarcerated prolapsed internal hemorrhoids that result in subsequent thrombosis [7-9].

Despite extensive research on hemorrhoids globally, the study of hemorrhoidal illness and its risk factors in North India remains inadequate. Insufficient information regarding hemorrhoidal illness and its risk factors may contribute to the elevated prevalence of hemorrhoids among the population of North India. Due to the lesser data available on hemorrhoidal illness and its associated risk factors, this study intends to identify the prevalence and risk factors of hemorrhoids among the patients at the surgical unit of F.H. Medical College, Agra, Uttar Pradesh.

METHODS

This prospective cross sectional observational study was conducted among the 372 diagnosed patients with hemorrhoids in the department of General Surgery, F.H. Medical College, Agra, Uttar Pradesh. The patients of all age groups of both genders presenting with hemorrhoids admitted in surgery ward and who had given informed, written and valid consent were included in the study. Patients with hemorrhoids resulting from anorectal neoplasm, pregnant female individuals and individuals under the age of 18 were excluded.

Data collection were conducted using a self-administered questionnaire to assess participant's sociodemographic information, lifestyle factors related to hemorrhoids, clinical manifestations of the condition, adherence to the Rome IV criteria for diagnosing functional constipation [10], and the impact of hemorrhoids on participants' quality of life [11]. The sociodemographic elements of the questionnaire pertained to age, gender, educational attainment, marital status, familial history of hemorrhoids, and health conditions linked with hemorrhoids. The lifestyle components included inquiries regarding physical activity, and dietary habits. The clinical manifestation of the condition was evaluated by determining the prevalence of hemorrhoidal symptoms, including the presence of hemorrhoidal masses, discomfort, anal pruritus, hemorrhage, discharge, and prolapse of the hemorrhoids. Descriptive statistics, such as frequency, percentage, median, and standard deviation, were utilized to define the study population in relation to various factors.

RESULTS

The key vitals during the physical examination of the patients are depicted in table 1. The overall mean age (year) of the study population was 43.35 ± 12.37 (mean ± SD). The mean height (cm) was 162.65 ± 9.21 (mean ± SD). The mean weight (kg) was 70.94 ± 10.32 (mean ± SD). The mean value of body mass index (BMI) was 26.99 ± 4.46 (mean ± SD).

Table 1 Physical Examination Of The Patient

PARAMETERS	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM	RANGE
AGE (YRS)	43.35	12.37	21.0	81.0	60.0
HEIGHT (CM)	162.65	9.21	143.00	185.00	42.00
WEIGHT (KG)	70.94	10.32	45.00	98.00	53.00
BMI	26.99	4.46	14.86	42.98	28.12

Out of 372 (100%) patients, (227, 61%) were males whereas females were 145 (39%) in number (table 2). The prevalence of hemorrhoids was larger in the age group 40 or more than 40 (224, 60.24%) than the age group less than 40 (148, 39.78%). The population of the rural area (232, 62.4%) suffers more than the urban area (140, 37.6%) in our study. In terms of education, the maximum cases belongs to the population having education in between primary and intermediate (129, 34.7%). Middle class (168, 45.2%) population has the maximum affected cases in our study whereas lower class (92, 24.7%) population has minimum affected. Most of the affected cases belongs to the population having mixed diet (264, 71%) whereas vegetarian (108, 29%) population is not affected much.

Table 2 Baseline Demographic Profile Of Study Population

PARAMETERS	CLASS	NO. OF CASES (N)	NO. OF CASES (%)

GENDER	Female	145	39.0
	Male	227	61.0
	Total	372	100
AGE	Less than 40	148	39.78
	40 or above	224	60.22
	Total	372	100
AREA	Rural	232	62.4
	Urban	140	37.6
	Total	372	100
EDUCATION	Illiterate	48	12.9
	Primary	128	34.4
	Intermediate	129	34.7
	Graduation	67	18.0
	Total	372	100
SOCIO ECONOMIC	Lower	92	24.7
	Middle	168	45.2
	Upper	112	30.1
	Total	372	100
DIET	Veg	108	29.0
	Mixed	264	71.0
	Total	372	100

Table 3 describes that hemorrhoids incidences were higher among the patients who had constipation (243, 65.3%), straining (205, 55.1%), cough (192, 51.6%), and bleeding per rectum (204, 54.8%).

Table 3 Risk Factors Of Hemorrhoids - Symptoms

PARAMETERS	YES	NO	TOTAL
FAMILY HISTORY	140 [37.6%]	232 [62.4%]	372 [100%]
CONSTIPATION	243 [65.3%]	129 [34.7%]	372 [100%]
STRAINING	205 [55.1%]	167 [44.9%]	372 [100%]
COUGH	192 [51.6%]	180 [48.4%]	372 [100%]
BLEEDING PER RECTUM	204 [54.8%]	168 [45.2%]	372 [100%]
RECTAL MASS	177 [47.6%]	199 [52.4%]	372 [100%]

Table 4 depicts the dietary habits of study population. The incidence of hemorrhoids was significantly higher among patients with no daily consumption of fresh vegetables (257, 69.1%) and fruits (272, 73.1%), regular intake of spicy food (224, 60.2%), inadequate water consumption (240, 64.5%), and insufficient fiber intake (228, 88.2%).

Table 4 Risk Factors Of Hemorrhoids – Dietary Habits

PARAMETERS	YES	NO	TOTAL
DAILY FRUIT	100 [26.9%]	272 [73.1%]	372 [100%]
DAILY VEG	115 [30.9%]	257 [69.1%]	372 [100%]
DAILY NON VEG	112 [30.1%]	260 [69.9%]	372 [100%]
DAILY SPICY FOOD	224 [60.2%]	148 [39.8%]	372 [100%]
DAILY WATER INTAKE	132 [35.5%]	240 [64.5%]	372 [100%]
FIBRE INTAKE	44 [11.8%]	228 [88.2%]	372 [100%]

Table 5 describes the risk factors of hemorrhoids w.r.t. the lifestyle and daily routine of study populations. The prevalence of hemorrhoids were observed in those patients who had, sedentary (244, 56.6%) lifestyle, no regular physical exercise (220, 59.1%), prolonged sitting (227, 61.0%), longer stay in toilet (218, 58.6%), and, stress (180, 75.26%). Among these, major responsible causes for hemorrhoids were sedentary lifestyle, no regular physical exercise, and stress.

Table 5 Risk Factors Of Hemorrhoids – Lifestyle & Daily Routine

PARAMETERS	CLASS	NO. OF CASES (N)	NO. OF CASES (%)
LIFESTYLE	Active	128	34.4
	Sedentary	244	56.6
	Total	372	100
PHYSICAL EXERCISE	Regular	152	40.9
	Not Regular	220	59.1
	Total	372	100
PROLONGED SITTING	Yes	227	61.0
	No	145	39.0
	Total	372	100
STAY IN TOILET	Shorter	154	41.4
	Longer	218	58.6
	Total	372	100
STRESS	Never	92	24.7
	Sometimes	157	42.2
	Often	123	33.1
	Total	372	100

DISCUSSION

The predominant age group in this study was 40-50 years, comprising 35% of the cases. The mean age of the study population was 43.35 years ± 12.37 (mean ± SD). The minimum age was 21 years, and the highest age was 81 years. This aligned with prior studies, which indicated that most instances occurred in individuals aged between 45 and 49 years or under 40 years [9, 12]. The mean value of body mass index (BMI) was 26.99 ± 4.46 (mean ± SD). BMI indicates that hemorrhoids patients were overweight or obese in the study population. According to a study [13]. (26), excess weight or elevated BMI predisposes individuals to hemorrhoids, and various research conducted globally have demonstrated a consistent correlation between lifestyle, body weight, and the incidence of hemorrhoids [7, 8].

The ratio of males exceeded that of females in this survey, as documented in numerous prior investigations [7, 9, 14]. This study detected the occurrence of hemorrhoids in patients with intermediate educational status (34.7%). Nonetheless, the emergence of hemorrhoids in individuals with poor educational attainment has been documented in several investigations [5, 15]. As per the study, the prevalence of hemorrhoids were observed in those patients which had, sedentary (56.6%) lifestyle, no regular physical exercise (59.1%), prolonged sitting (61.0%), longer stay in toilet (58.6%), and, stress (75.26%).

The incidence of hemorrhoids was elevated in patients who did not consume fresh vegetables everyday (69.1%) and fruits (73.1%), regularly ingested spicy food (60.2%), had inadequate water intake (64.5%), and had insufficient fiber consumption (88.2%). A comparable function of diet was also reported in other research [2, 16]. Proper hydration plays a preventative function in the onset of hemorrhoids, a conclusion supported by additional research [15, 16]. A comparable study [13] also observed that constipation predisposes individuals to hemorrhoids, a conclusion corroborated by research conducted in India [17]. Constipation results in straining, which predisposes individuals to hemorrhoids. A study [18] indicated that 40% of the sample experienced constipation three or more times weekly, which was substantially correlated with the reporting of hemorrhoid symptoms. Prolonged duration in the toilet for evacuation (58.6%) was also associated with an increased incidence of hemorrhoids, corroborating findings from a previous study [13].

CONCLUSION

This study revealed that modifiable risk variables (lifestyle, food habits, addictive behaviors, etc.) are nearly as significant in the development of hemorrhoids as non-modifiable risk factors (age, inheritance, and genetic predisposition). The patients were advised to embrace healthy lifestyles regarding eating habits, cease addictive behaviors, modify their employment, and engage in physical activity. Health management authorities should enhance awareness of hemorrhoid risk factors through public announcements, newsletters, mass media initiatives, and periodic health fairs. Educating the public on the risk factors and preventive measures for hemorrhoids could reduce their incidence, hence enhancing the quality of life for individuals susceptible to this condition.

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