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## Research Article

### A STUDY ON ASSOCIATED RISK FACTORS OF HAEMORRHOIDS

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#### ABSTRACT

The objective of this study is to investigate the associated risk factors of haemorrhoids. The study was conducted in the Hospital of National Institute of Unani Medicine. It was a cross sectional study of 1 year duration. A total number of 311 patients were found to be suffering from haemorrhoids in which 236 were males and 75 were females. Patients were diagnosed on the basis of anorectal examination which includes inspection, digital examination and proctoscopy. Both modifiable and non-modifiable risk factors were recorded in a pretested semi-structured schedule. In the present study out of 416 patients, 311 were found to be having haemorrhoids. Prevalence of haemorrhoids was found maximum in age group of  $\geq 40$  years, and in those who were not doing morning or evening walk or other extra physical activities; in those whom family history of haemorrhoids was positive; which clearly shows the association of haemorrhoids with the advancement in age, sedentary lifestyle and heredity and genetic make-up.

**Keywords:** Haemorrhoids; Risk factors; Prevalence; Unani Medicine

#### INTRODUCTION

Haemorrhoidal disease is one of the most common anorectal disorders, which is troubling the mankind since time immemorial. Although haemorrhoidal disease is not fatal, it creates physical and psychological discomfort due to its nagging symptoms such as anal bleeding, pain and itching sensation and significantly influences the quality of life (QOL) of the diseased person. In addition, frequent recurrence, incomplete elimination of discomfort even after hemorrhoidectomy and postoperative discomfort including pain, made haemorrhoids the biggest problem all over the world that hinders patient's ability to live normally and work efficiently.<sup>1</sup> It is difficult to know the exact prevalence of haemorrhoids due to the embarrassing nature of the disease. Some researchers suggest that about 75 % of people will have symptomatic haemorrhoids at some point of time in their lives.<sup>2</sup> Due to its higher prevalence, haemorrhoids are now considered a major cause of morbidity and imposes severe burden on the society both economically and socially. These points raise the need to prevent haemorrhoids through effective management of risk factors. Definite etiological cause(s) are still unknown but there are many factors that are found to be responsible for the development of haemorrhoids. All those factors that have definite potential and association with haemorrhoids are called as risk factors. Elimination and modification of these risk factors are the keys towards the effective control and prevention of haemorrhoids. Among these risk factors some are modifiable, e.g. life style, occupation, increased intra abdominal pressure etc. while other are non-modifiable, e.g. age, sex, genetic factors etc.

#### MATERIALS AND METHODS

A one year duration study was conducted in the Hospital of National Institute of Unani Medicine. The study was started

after obtaining the ethical clearance from the Institutional Ethical Committee (IEC) of NIUM, Bangalore, Karnataka, India (NIUM/IEC/2010-11/10/TST/02). It was a cross sectional study in which patients with pain, bleeding, discharge and/or Prolapse per rectum of both sexes were included and detailed history was taken regarding the disease. A total number of 416 patients were included in the study (more than the calculated sample size (279) at the prevalence rate of 38.93 %<sup>3</sup>). Personal profile of every included patient was recorded on the pre-structured schedule. In the schedule both modifiable and non-modifiable risk factors including age, sex, anthropometry, smoking, alcohol consumption, family history, diet history, exercise profile, religion, occupation, sign and symptoms were recorded. Every effort was utilized to record the risk factors objectively wherever there was even little possibility. For the conformation of diagnosis of haemorrhoids anorectal examination was performed which includes inspection (visual examination of anus and surrounding area), digital examination and proctoscopy.

#### RESULTS AND DISCUSSION

**Table 1: Distribution of Patients according to the Presence of Haemorrhoids**

Haemorrhoids	No. of Patients	Percentage (%)
Present	311	74.76
Absent	105	25.24
Total	416	100

As shown in Table 1, in the present study out of 416, 311 (74.76 %) were found to be having haemorrhoids. This study was hospital based and the patients with anorectal ailments i.e. bleeding, pain, prolapse and/or discharge per rectum were included so the high prevalence of haemorrhoids was expected, because among the anorectal disorders haemorrhoids is the most common and tops the list. In the study, performed by Haas *et al.*

the overall prevalence rate of haemorrhoids was found to be 86 % among the patients examined in a colon and rectal surgical clinic.<sup>4</sup>

**Table 2: Prevalence of haemorrhoids according to the level of probable risk factors**

Risk Factors	Patients with haemorrhoids (n = 311)	
Age	< 40 years = 130	≥ 40 years = 181
Gender	Male = 236	Females = 75
Exercise	Yes = 33	No = 274
Dietary habits	Veg. = 66	Mixed = 245
Family History	Present = 195	Absent = 116

As shown in Table 2, according to age, prevalence of haemorrhoids in age group ≥ 40 years is higher (58.2 %) than in the age group < 40 years (41.8%). This is because the age distribution of haemorrhoids demonstrated a hyperbolic pattern with a peak between ages of 45-65 years.<sup>5</sup> According to gender, prevalence in males is higher (75.9 %) than in females (24.1 %), this is contradictory from the data provided by other studies which revealed that both sexes experience approximately the same incidence and prevalence of haemorrhoids, but if both symptomatic and asymptomatic haemorrhoids are taken into consideration the presence of haemorrhoids are marginally more in males.<sup>4,6</sup> This may be due to the higher attendance of male patients in the Hospital of National Institute of Unani Medicine, or may be due to the reason that the females are too shy to talk about or to consult the physician for anorectal disorders. According to exercise or physical activities of the patients, most

of them (274 out of 311) were found to be leading a sedentary life i.e. they were not doing any extra physical activity like morning or evening walk and from various studies it is clearly evident that one of the major risk factors that predisposes to the development of haemorrhoids is lack of exercise and sedentary lifestyle. According to the dietary habits, out of 311, 245 were on mixed type diet and only 66 were taking vegetarian type diet. In most of the medical literature it is mentioned that whose diets are low in fiber consistently exhibit much higher incidences of haemorrhoids and hemorrhoidal symptoms.<sup>7</sup> It is also mentioned in classical Unani texts that the major cause for the development of haemorrhoids is saudawi madda and ghaleez dam (viscid blood) which is produced by ghaleez and kaseef aghziya; and a wide variety of animal origin foods lie in the category of ghaleez and kaseef aghziya.<sup>8-14</sup> So from the above data it is inferred that haemorrhoids found clearly in excess in those patients who were on low fibrous diet. According to the family history, out of 311, 195 patients have positive family history of haemorrhoids and 116 have not given any such type of history. Several comparative studies have shown that haemorrhoids do appear in certain family groups more than others. However, the link between heredity or genetics and haemorrhoids has not been established. It is just as possible that lifestyle choices, common to family members, are the contributing factors rather than genetics. Weak vascular tendencies can be inherited, but whether this is a major contributor to the development of haemorrhoids is unknown.<sup>7</sup> But from the above data family history has appeared as a major contributory factor of haemorrhoids.

**Table 3: Distribution of Patients according to the Occupation**

Occupation	No. of Total Patients (416)	%	No. of Haemorrhoids Patients (311)	%
Unemployed	126	30.29	102	32.8
Accountant	4	0.96	2	0.64
Baker	1	0.24	1	0.32
Bidi maker	1	0.24	1	0.32
Book seller	1	0.24	0	0
Businessman	65	15.6	46	15
Carpenter	1	0.24	1	0.32
Clerk	13	3.12	11	3.53
Contractor	2	0.49	2	0.64
Coolie	2	0.49	2	0.64
Cycle shopkeeper	1	0.24	0	0
Property Dealer	4	0.96	2	0.64
Driver	60	14.44	50	16.1
Electrician	6	1.44	4	1.3
Engineer	4	0.96	2	0.64
Farmer	3	0.72	2	0.64
Field worker	2	0.49	1	0.32
Govt. servant	4	0.96	4	1.3
Handicraft maker	1	0.24	1	0.32
Religious leader (Imam, Moazzin)	3	0.71	1	0.32
Black smith	2	0.49	2	0.64
Labourer	19	4.57	12	3.86
Machine operator	5	1.20	2	0.64
Mechanic	7	1.68	6	1.92
Painter	5	1.20	3	0.96
Retired	7	1.68	5	1.6
Watchman	4	0.96	4	1.3
Shop keeper	8	1.92	6	1.92
Steel worker	1	0.24	1	0.32
Store keeper	1	0.24	1	0.32
Student	16	3.84	7	2.24
Supervisor	4	0.96	3	0.96
Supplier	5	1.20	4	1.3
Tailor	14	3.36	11	3.53
Teacher	6	1.44	5	1.6
Tile maker	1	0.24	0	0
School Trusty	1	0.24	1	0.32
Vendor	3	0.72	1	0.32
Waiter	2	0.49	1	0.32
Watch maker	1	0.24	1	0.32

As shown in the Table 3, the data about the occupation of the patients clearly shows that haemorrhoids are associated with those occupations which require prolonged standing or sitting or weight lifting like clerk, driver, security guard, coolie etc. It is mentioned that the people whose occupation require prolonged sitting or standing are more prone for haemorrhoids. Also lifting

heavy weights increases the intra abdominal pressure, which is also a risk factor for haemorrhoids. Washaw LJ and Turell noted a number of patients in whom occupation stress or strain played an important role in precipitating prolapse of existing internal haemorrhoids.<sup>15-17</sup>

**Table 4: Distribution of Patients according to the Risk Factors which raise the Intra-abdominal Pressure**

Risk Factors	No. of Total Patients (416)	%	No. of Haemorrhoids Patients (311)	%
Constipation	4	0.96	4	1.3
Constipation + straining	267	64.18	206	66.20
Straining	3	0.72	0	0
Constipation + straining + BPH	2	0.48	1	0.32
Chronic cough	2	0.48	2	0.64
Constipation + straining + Chronic cough	2	0.48	2	0.64
Constipation + straining + Pregnancy	5	1.2	5	1.6
Constipation + straining + Weight lifting	4	0.96	4	1.3
No risk factors	127	30.53	87	28.0
<b>Total</b>	<b>416</b>	<b>100</b>	<b>311</b>	<b>100</b>

As shown in the Table 4, out of 311, 224 patients were found to be having those factors that are responsible for elevating the intraabdominal pressure e.g. constipation, straining, BPH, chronic cough, etc. This raised intraabdominal pressure exerts pressure on the veins of the anal canal and ultimately cause the prolapse of the veins. F. Delco and A. Sonnenberg, in their case control study named 'Association between haemorrhoids and other diagnosis', they found the odds ratio = 1.48 (1.43-1.54) of haemorrhoids and constipation and related diseases with 95 % confidence level.<sup>18</sup> And from above data it is clearly evident that factors responsible for elevating the intraabdominal pressure especially constipation, are highly responsible for the development of haemorrhoids. However, our study has several limitations to be considered. First, due to the lack of available information, we could not evaluate the risk of haemorrhoids associated with BMI and addiction of smoking, tobacco chewing and alcoholism which were commonly indicated as risk factors of haemorrhoids in previous studies.

## CONCLUSION

Determining the strength of association of risk factors as etiological factors of haemorrhoids is not easy and etiological role can only be established on the basis of several large studies. Cohort studies provide conclusive inference regarding the etiological role. In the present study, risk factors were explored only in 311 haemorrhoids. In the present study, main emphasis was to observe the prevalence of haemorrhoids in studied population. Simultaneously known risk factors were also recorded. In this study we observed that modifiable risk factors (lifestyle, dietary habits, addictive habits, occupation, etc) are almost equally important for the development of haemorrhoids as the non modifiable risk factors (age, heredity and genetic makeup). So the patients were suggested to adopt healthy lifestyles in terms of dietary habits, to stop the addiction, modifications at their occupations and to do exercise.

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