

Prevalence of Fissure-in-Ano among the Patients of Anorectal Complaints Visiting Nium Hospital

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Abstract

Background and objective: Anal fissure is one of the most painful conditions among the anorectal disorders. In classical Unani literature, anal fissure is termed as shiqaq e miqad. It is a common anorectal condition, and in terms of prevalence it ranks third after chronic constipation and haemorrhoids but exact data on its prevalence is rare. Therefore, this study was designed to estimate the prevalence of anal fissure among the patients of anorectal complaints visiting NIUM Hospital.

Materials and methods: Present study was a cross sectional study of 1 year duration conducted in the Hospital of National Institute of Unani Medicine between 2012 and 2013. A total of 416 patients with anorectal ailments were included; 317 males and 99 females. Diagnosis was made on the basis of clinical findings and anorectal examination, which includes inspection (visual examination of anus and surrounding area), digital examination and proctoscopy.

Results: The present study revealed that out of 416 subjects, 65 (15.62%) were found to be suffering from anal fissure, out of them 48 were males and 17 were females. Out of those 65 patients, 5 were also found to be having haemorrhoids along with anal fissure. Constipation, low fibre diet and less physical activities are found to be significantly associated with anal fissures.

Conclusion: Present study reveals that anal fissure is a common anorectal condition. Constipation and other life style factors (e.g. diet etc.) are the modifiable risk factors for the anal fissure. Health education should be provided to the patients to adopt certain lifestyle changes that can be beneficial to limit the progress of the disease.

Keywords: Fissure in Ano; Prevalence; Anorectal disorders; Unani medicine

Introduction

Anal fissure is a longitudinal tear or disruption in the anoderm at the distal end of anal canal. It typically extends from below the dentate line to the anal verge and usually located posteriorly in the midline, probably because of the relatively unsupported nature and poor perfusion of the anal wall in that location [1,2]. Although it is not a fatal condition, but can significantly influence the quality of life of the affected person due to its troubling symptoms such as severe pain, bleeding per rectum, spasm of the internal sphincter [2,3]. The pain is so severe that the patient is scared of defecation and therefore he makes an effort to delay the defecation [3,4]. Despite extensive researches and advancements made in the field of medicine and surgery, exact aetiology of anal fissures is still unknown. Trauma due to the passage of hard stool is thought to be an important initiating factor for the fissure; or less commonly prolonged and repeated passage of diarrhoea. Low fibre diet is also found to be associated with the development of anal fissures [1,2,5].

Other causes may include poor toileting habits and poor anal hygiene especially in young children, childbirth trauma in women, Crohn's disease etc. [6]. According to classical Unani literature, anal fissure is termed as shiqaq e miqad and the factors responsible for their development is the passage of dry, hard stool or frequent passage of diarrhoea or akkal khilt (corrosive matter) through the anus or excessive consumption of dry substances. The cause of this dry hard stool as mentioned in the Unani texts is may be the hot and dry temperament of rectum that hardens the stool [7,8]. Many fissures heal within weeks whereas some become chronic and deep in nature and will not heal and may be infected by faecal bacteria. The most common cause of non-healing is spasm of the internal anal sphincter muscle which results in impaired blood supply to the anal mucosa [6]. It develops with equal frequency in both sexes and most often occur in younger and middle aged persons (between 15 to 40 years) [1,5,6]. By themselves fissures are rarely serious but if left untreated they can be extremely troublesome and may result in the development of ulcer, fistula and rectal polyps [3]. Moreover, fissures (occurring off the midline) may be associated with Crohn's disease, sexually transmitted diseases (HIV, syphilis, or herpes), anal cancer, or tuberculosis; [1,2,9] and hinders patient's ability to live normally and work efficiently and ultimately imposes severe burden on the society both economically

and socially. In terms of prevalence, it ranks third after chronic constipation and haemorrhoids [3], but exact data on its epidemiology is rare [2].

Keeping the above points in the mind, the present study was designed to estimate the prevalence of fissure-in-ano among the patients with anorectal ailments attending NIUM hospital.

Materials and Methods

The study was conducted in Health Promotive Unit (HPU) and Surgery OPD of NIUM Hospital, Bangalore after obtaining ethical clearance from institutional ethics committee (Ethical Clearance No. NIUM/IEC/2010-11/10/TST/02). The present study was a cross sectional of one year duration. Objective of the study was to estimate the prevalence of hemorrhoids and anal fissure among the patients of anorectal ailments visiting NIUM hospital. Sample size was calculated as 279 on the basis of formula $N=4pq/L^2$ (p =prevalence, $q=1-p$, L =allowable error), taking the prevalence rate (of hemorrhoids) as 38.93% [10] and permissible error level as 15%, but 416 patients were taken to increase the level of precision. Patients with pain, bleeding, discharge and/or prolapse per rectum of either sex were included in the study. Pregnant and known/diagnosed patients of Ca rectum were excluded. The data were collected from under study population through a pretested and semi-structured schedule, which was designed in such a manner that more information regarding demographic profile, risk factors, morbidity and diagnosis could be collected. Reasons for the study were explained to the patients; prior to interview a written consent was taken. Diagnosis was made on the basis of clinical findings and anorectal examination, which includes inspection (visual examination of anus and surrounding area), digital examination and proctoscopy. Anorectal examination was performed under the supervision of qualified surgeons.

Observations and Results

Observations and results are given in Tables 1-3.

Fissure	No. of Patients	Percentage (%)
Present	65	15.62
Absent	351	84.38
Total	416	100

Table 1: Distribution of patients according to the presence of fissure (n=416).

Factors		Fissure number present/Total
Gender	Male	48/317
	Female	17/99
Age group	<15 years	1/4
	15-40 years	42/215
	≥41 years	22/197
BMI	Underweight	1/18
	Normal	27/199

	Overweight and Obese	37/199
Dietary habits	Vegetarian	14/81
	Mixed	51/335
Exercise (extra physical activity)	Yes	8/51
	No	57/365
Constipation	Yes	48/284
	No	17/132

Table 2: Factors Associated with Fissure-in-Ano.

Symptoms	No. of total patients (416)	Percentage (%)	No. of fissure patients (65)	Percentage (%)
	Bleeding	22	5.3	0
Pain	44	10.57	24	37
Prolapse	2	0.48	0	0
Bleeding+Anemia	3	0.72	0	0
Bleeding+Discharge	1	0.24	0	0
Bleeding+Pain	186	44.71	37	57
Bleeding+prolapse	7	1.68	0	0
Pain+Prolapse	15	3.6	0	0
Pain+Discharge	2	0.48	0	0
Bleeding+Pain+Prolapse	113	27.6	2	3
Bleeding+Pain+Anemia	6	1.44	2	3
Bleeding+Pain+Discharge	1	0.24	0	0
Pain+Prolapse+Discharge	2	0.48	0	0
Bleeding+Pain+Prolapse+Anemia	11	2.64	0	0
Bleeding+Pain+Prolapse+Discharge	1	0.24	0	0
Total	416	100	65	100

Table 3: Distribution of patients according to the symptoms.

Discussion

As shown in Table 1, among the 416 included patients 65 (15.62%) were diagnosed of anal fissure. Its incidence in general population is around 1 in 350 adults [6]. While in present study patients with anorectal ailments i.e. bleeding, pain, prolapse and/or discharge per rectum were included, so the high prevalence of anal fissure was expected. According to a study carried out in proctology clinic 10% patients were found to be affected with anal fissure [11] which is somewhat closer to our data.

As shown in Table 2, sex wise distribution of the total number of included patients revealed that 76.20% (317) were males and 23.80%

(99) were females and similarly the distribution of anal fissure patients revealed that 15.14% (48) were males and 17.17% (17) were females in the studied sample. It is mentioned that anal fissures develop with equal frequency in both sexes^{1,5,6} and according to our data frequency of anal fissure is more in males than females. The reason of this may be due to the higher attendance of male patients in NIUM hospital, or it may be due to that the females are too shy to talk about or to consult the physician for anorectal disorders.

As per age group, out of 65 patients 42 belonged to the age group of 15-40 years, this justifies the fact that the anal fissures are more common in younger and middle aged persons. In young and middle aged persons muscles are toned and this tonicity resists the passage of hard stool and will result in the formation of fissure and may be due to this reason fissures are rare in aged persons due to muscular atony [5,6,12].

According to the BMI, out of 65 about half of the patients (i.e. 37) with anal fissure were overweight and obese, and it has been mentioned that overweight and obese patients are more prone to develop anal fissure. Mapel et al observed in their study 'The epidemiology and treatment of anal fissures in a population-based cohort' that there is a significant association between anal fissures and obesity [2].

Among 65 anal fissures patients 14 were vegetarian and 51 were on mixed type diet. In most of the medical literature it is mentioned that low fibre diets are associated with the development of anal fissures. The results of the study 'Diet and other risk factors for fissure-in-ano' conducted by Dr. S. L. Jensen, revealed that there is a significant dissociation between high fibre diets (i.e. raw fruits, vegetables, and whole-grain bread) and anal fissures [13]

Included patients were asked about their exercise profile in dichotomous way either they were performing the exercise or not. In this regard our emphasis was on intentional extra exercise because one of the risk factors that predisposes to the development of anal fissure is lack of exercise and sedentary lifestyle. As it is mentioned in texts that moderate exercise, such as walking helps regular bowel movements and limit the onset of large hard stools. Also, exercise promotes increased blood flow to all parts of the body and poor blood supply is one of the important causes of anal fissure [14]. Data from the present study revealed that out of 65 patients only 8 were found to perform some sort of extra intentional activities in the form of morning or evening walk. On the other hand 57 anal fissure patients were found not doing any form of extra intentional activities. This data clearly indicates some association between sedentary life and development of anal fissure.

Included patients were also asked about their bowel habits as trauma due to the passage of hard stool, as in constipation, is thought to be and mentioned in many texts as an important initiating factor for the development of anal fissure [1,3,5,7-9,11]. In our study out of 65 anal fissure patients, 48 were found to be with constipation and 17 were not. So from the above data, it is clearly evident that constipation (hard stool) is one of the main risk factor for the development of anal fissure.

As shown in Table 3, all patients were asked about the anorectal symptoms on the basis of which they were enrolled. Out of 65 anal fissure patients, 24 were complaining about pain solely, 37 were complaining about pain along with bleeding [2], were complaining about bleeding, pain and prolapse and 2 out of 65 patients were found to be having anaemia along with pain and bleeding. As it is mentioned

in the texts that pain and bleeding are the two main symptoms of the anal fissure and they are so specific that the diagnosis can be made on the basis of history alone.^{1-5,9,11,12} From the above data, all 65 patients were having typical excruciating pain and 37 had given the history of bleeding along with pain, so it is inferred that pain and bleeding are two main symptoms. As 2 patients were complaining about the prolapse along with pain and bleeding this is due to the reason that these 2 patients were also suffering from 2nd degree haemorrhoids along with anal fissure. As far as anaemic patients (2) are concerned, bleeding due to anal fissures can rarely cause anaemia and should be considered as complication rather than a symptom.

Conclusion

Anal fissure is a common and painful anorectal problem that troubles utterly the affected individuals. It is more common in young and middle aged persons with almost equal frequency in both males and females. Exact aetiology is still unknown but some factors like constipation, low fibre diet and less physical activities are found to be significantly associated with this condition. This condition can be prevented with slight modifications in life style like preventing constipation by eating food rich in fibres, drinking enough water, occasional use of a stool softener, careful anal hygiene after defecation and doing moderate intensity exercise. So the patients and other peoples, especially those at risk, should be educated about the preventive measures of anal fissures and also they should be motivated to adopt healthy life style for the better quality of life.

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