Print ISSN: 2321-6379
Online ISSN: 2321-595X
DOI: 10.17354/ijss/2018/86

Original Article

Prevalence and Clinical Presentation of Fissure-in-ANO in A Tertiary Care Centre

M S Varadarajan[1], P S Sony[2], Heber Anandan[3]

[1]Professor, Department of General Surgery, Tirunelveli Medical College, Tirunelveli, Tamil Nadu, India, [2]Junior Resident, Department of General Surgery, Tirunelveli Medical College, Tirunelveli, Tamil Nadu, India, [3]Senior Clinical Scientist, Department of Clinical research, Dr. Agarwal's Healthcare Limited, Tirunelveli, Tamil Nadu, India

Abstract

Introduction: Fissure-in-ano is a common proctologic problem encountered. It is a tear in anal mucosa distal to dentate line usually seen in the posterior midline. Hypertonia of internal anal sphincter and local ischemia is thought to be the pathology behind anal fissures.

Aim: The present study aims at determining the prevalence and clinical presentation of fissure-in-ano.

Materials and Methods: This study is a cross-sectional study conducted at Tirunelveli Government Medical College in patients with anorectal ailments who were randomly selected in this study. The diagnosis was made on the basis of anorectal examination which included inspection, digital rectal examination, and proctoscopic examination.

Results: Our study found out that out of the 325 patients with anorectal ailments, 100 patients (30.7%) were having anal fissures. Out of them, 54 were males and 46 were females, majority were under 40 years age. Pain during defecation, bleeding and constipation were reported as the common clinical symptoms. 76% of patients with fissure-in-ano had an acute presentation and the most common location was reported to be posterior midline (98%).

Conclusion: Our study reveals that fissure-in-ano is a common proctologic disease. Lifestyle modification plays a major role in cure of this condition as constipation, and low fiber diet are the direct etiological factors.

Key words: Anal fissure, Clinical presentation, Constipation

INTRODUCTION

Fissure-in-ano is one of the most common causes of anal pain. It is a linear tear in the squamous epithelial lining of anal canal distal to dentate line.[1] It affects both men and women and are common in all age groups especially young people.[2] Usually, it is located in the posterior midline or anterior midline. It can extend from dentate line proximally to anal verge distally. The etiopathogenesis of fissure-in-ano is not well understood. Internal anal sphincter hypertonia and local ischemia are the proposed pathology of anal fissures due to the association of these factors with painful fissures. Passage of hard stools, poor anal hygiene, intake of spicy food, and iatrogenic causes are the documented causes for fissure-in-ano.[1,3,4] Fissure-in-ano is of two types - acute and chronic. Acute fissure presents within 3–6 weeks of onset of symptoms.[5] It usually resolves spontaneously with high fiber diet and stool softening agents.[2] Chronic fissure presents with more than 6 weeks of symptoms. Unlike acute anal fissure, it does not heal spontaneously. It requires intervention. Anal fissures are classified based on etiology as primary and secondary. Primary is idiopathic whereas secondary fissure is due to some pathologies such as inflammatory bowel disease, tuberculosis, and malignancy.

Access this article online

www.ijss-sn.com

Month of Submission : 01-2018
Month of Peer Review : 02-2018
Month of Acceptance : 02-2018
Month of Publishing : 03-2018

Aim

The present study aims at determining the prevalence and clinical presentation of fissure-in-ano in patients in Tirunelveli.

Corresponding Author: Dr. P S Sony, Department of General Surgery, Tirunelveli Medical College, Tirunelveli, Tamil Nadu, India. Phone: +91-9497617687. E-mail: sonycarmel@gmail.com

MATERIALS AND METHODS

This cross-sectional study was conducted in the Department of General Surgery at Tirunelveli Government Medical College; in patients with anorectal ailments after obtaining written informed consent. The inclusion criteria include patients with age group 20–60 years with anorectal ailments who attended the outpatient department. Exclusion criteria include patients with anorectal malignancies, pregnant/lactating mother, and patients with a history of prior anal surgery. Patients were subjected to a clinical examination which consisted of digital rectal examination and proctoscopic examination. Colonoscopy and sigmoidoscopy were done as needed. The data collected were statistically analyzed using SPSS software.

RESULTS

Out of 325 patients studied, 100 patients had fissure-in-ano, consisting 30.7% of patients with anorectal ailments [Table 1].

In our study, out of 100 patients with fissure-in-ano, 54 were males and 46 were females, and most of the patients belonged to the age group 31–40 years with overall male predominance expect for the age group 20–30 years which showed a slight female preponderance [Table 2].

Majority of the patients presented with pain during defecation (86%) followed by bleeding (62%), constipation, pruritus, and discharge [Table 3].

Painful defecation and constipation were predominant in males whereas in females bleeding per anum was more predominant [Table 4].

Patients with younger age group presented mostly with pain and bleeding per rectum wherein pruritus and discharge were more in older age group [Table 5].

Majority of fissure were posterior midline in location (98%) followed by anterior midline, especially in females.

In our study, 76% patients presented with acute anal fissure and 24% with a chronic fissure. Most of the patients with chronic anal fissure had sentinel pile.

DISCUSSION

Anal fissure is a linear tear in the anal canal distal to dentate line.[1] Posterior midline is the most common location followed by anterior midline in females.

Table 1: Age and sex distribution of patients

Age group	Number of patients	Male	Female
20–30	35	11	24
31–40	42	28	14
41–50	12	7	5
51–60	11	8	3

Table 2: Clinical presentation of fissure-in-ano

Symptoms	Number of patients
Pain during defecation	86
Bleeding	62
Constipation	56
Pruritus	12
Discharge	6

Table 3: Clinical presentation and sex distribution

Clinical presentation	Male	Female
Pain during defecation	52	34
Bleeding	30	32
Constipation	39	17
Pruritus	4	8
Discharge	3	3

Table 4: Clinical presentation and age group

Age group	Pain	Bleeding	Constipation	Pruritus	Discharge
20–30	32	23	19	5	0
31–40	36	18	17	4	1
41–50	9	11	10	2	2
51–60	9	10	10	1	3

Table 5: Position of fissure-in-ano

Position	Number of patients
Posterior midline	98
Anterior midline	2
Others	0

The etiopathogenesis of fissure-in-ano is unclear.[3] The initiation of anal fissure is commonly associated with chronic constipation and passage of hard stools.[6] Some of the common associations of anal fissures are inflammatory bowel disease and tuberculosis. Women in childbearing age group are at risk of developing anal fissure during pregnancy and following delivery due to poor muscular support to the pelvic floor.[7]

The clinical features of anal fissures are pain during defecation followed by passage of bright red blood per rectum.[1] In acute fissure, pain may be very severe such that patient will not pass stool which further leads to hardening of stools thereby complicating anal fissure.[7] Sentinel pile and hypertrophied anal papillae are the characteristic

findings in a chronic anal fissure in addition to spasm of the internal anal sphincter.

In our study, out of 325 patients with anorectal ailments, 100 had fissure-in-ano accounting for 30.7% of study population. Khan *et al.* reported the prevalence as 15.62% in his study population.[8]

In our study, most affected age group was 31–40 years, with a slight male preponderance. Giridhar *et al.* reported increased prevalence of fissure-in-ano in age group 21–30 years with male predominance.[5] Gupta *et al.* reported that the mean age of presentation of fissure-in-ano is 40.13 years with male to female ratio 1.47:1.[9] The reason of this may be due to the higher attendance of male patients in our hospital, or it may be due to that the females are too shy to talk about or to consult the physician for anorectal disorders.[8] 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.[10,11]

Popat *et al.* and Khan *et al.* reported pain during defecation as the most common presentation followed by bleeding and constipation.[2,8] This is in concordance with our study.

Anal fissure can occur in posterior or anterior midline due to lack of muscular support posteriorly and poor blood supply. In our study, posterior midline was the most common location (98%). Suverna *et al.* also reported the most common location as posterior midline.[3]

CONCLUSION

The anal fissure is one of the most common painful anorectal problems that trouble the common population. It is more common in young and middle-aged persons with slight male preponderance. The exact etiology is still unknown, but some factors such as constipation and low fiber diet are found to be significantly associated with this condition. This can be prevented with lifestyle modifications. In acute stages change in diet habit by including fiber-rich diet, and stool softeners can itself cure the condition. If it is left unattended, the fissure-in-ano will take a chronic course which will need intervention to manage. Hence, the patients and people who are at risk should be educated about the preventive measures of anal fissures, and they should be motivated to adopt a healthy lifestyle for the better quality of life.

REFERENCES

1. Leong AP. Pharmacological treatment of anal fissure-a future role in primary care. Singapore Med J 2003;44:136-40.
2. Popat A, Pandey CP, Agarwal K, Srivastava VP, Sharma SM, Dixit A. A comparative study of role of topical diltiazem 2% organo gel and lateral internal sphincterotomy for the management of chronic fissure in ano. Int J Contemporary Med Res 2016;3:1363-5.
3. Suvarna R, Panchami GR. Chemical sphicterotomy versus surgical sphicterotomy in the management of chronic fissure in ANO: A prospective, randomized trial. J Clin Diagnostic Res 2012;6:1018-21.
4. Gupta PJ. Consumption of red-hot chili pepper increases symptoms in patients with acute anal fissures. Ann Ital Chir 2008;79:347-51.
5. Giridhar CM, Babu P, Rao KS. A comparative study of lateral sphincterotomy and 2% diltiazem gel local application in the treatment of chronic fissure in ano. J Clin Diagnostic Res 2014;8:NC01.
6. Jensen SL, Lund F, Nielsen OV, Tange G. Lateral subcutaneous sphincterotomy versus anal dilatation in the treatment of fissure in ano in outpatients: A prospective randomised study. Br Med J (Clin Res Ed) 1984;289:528-30.
7. Gupta PJ. Treatment of fissure in ano-revisited. Afr Health Sci 2004;4:58-62.
8. Khan RM, Itrat M, Ansari AH, Zulkifle AS. Prevalence of fissure-in-ano among the patients of anorectal complaints visiting nium hospital. J Community Med Health Educ 2015;5:2161-711.
9. Gupta V, Rodrigues G, Prabhu R, Ravi C. Open versus closed lateral internal anal sphincterotomy in the management of chronic anal fissures: A prospective randomized study. Asian J Surg 2014;37:178-83.
10. Das S. A Concise Textbook of Surgery. 7th ed. Kolkata: West Bengal; 2012. p. 1083-4.
11. Sagap I, Remzi FH. Controversies in the treatment of common anal problems. World J Gastroenterol 2006;12:3146.

How to cite this article: Varadarajan MS, Sony PS, Anandan H. Prevalence and Clinical Presentation of Fissure-in-ANO in A Tertiary Care Centre. Int J Sci Stud 2018;5(12):70-72.

Source of Support: Nil, **Conflict of Interest:** None declared.