LOCATION OF ANAL FISSURE IN 127 PATIENTS

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ABSTRACT
Objective: *To find out the different locations of anal fissure.*
Study Design: *Single-centre, Descriptive, cross-sectional study.*
Setting & Duration: *Surgical Out Patient Department of Khyber Teaching Hospital, Peshawar from January 2007 to December 2008.*
Methodology: *It is a prospective study and included all those patient who presented in surgical out patient department and diagnosed as anal fissure on basis of history and physical examination and location of fissure was recorded.*
Results: *A total of 127 consecutive patients with anal fissure were included. The spectrum of different complaints included pain before, during or after defecation, constipation or difficulty in defecation, PR bleeding, pruitis-ani or peri-anal burning, mucoid discharge and incontinence to faeces or flatus.*
Sixty (47.2%) patients were having fissures in posterior midline, 27(21.3%) in anterior midline and 3(2.4%) patients were having lateral fissures. Anal fissures at multiple locations simultaneously were also found.
Conclusion: *There are a much greater percentage of fissures located at other locations besides posterior midline across both sexes than is being traditionally reported in literature.*

KEYWORDS: *Anal Fissure, Digital Rectal Examination (DRE), Painful Defecation*

INTRODUCTION

Anal fissure is a benign painful elongated ulcer situated in the long axis of the anal canal[1] extending from just below the dentate line[2] to anal verge i.e. the anoderm.[3] First recognized as a disease in 1934, it is a common condition affecting a sizeable majority of the population[1,4-6] including all age groups but is particularly seen in young and healthy adults.[5] It occurs with equal incidence across both sexes causing considerable discomfort, social embarrassment, loss of work hours and reduction in quality of life.[6-8]

Anal fissure can be classified as;
1. Acute or superficial
2. Chronic fissure -in-ano or anal ulcer

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When mature, an ulcer is associated with a skin tag (sentinal pile).[9] Acute anal fissures progress to chronic anal fissure if not treated properly.[6] Diagnosis of primary or idiopathic anal fissure is made mostly from history and a gentle rectal examination. Usually a skin tag over lying the fissure and fissure itself can be seen everting the anal canal using lateral traction.[2,10]

In case of doubt, an examination under anesthesia may be carried out to properly diagnose the condition. It is carried out more commonly to exclude much serious pathology that may be responsible for causing the ano-rectal complaints since it may not be possible to properly evaluate by just Digital Rectal Examination in cases where there is much pain. Sometimes EUA is combined with treatment for the condition in the form of lateral internal sphincterotomy for the chronic anal fissures not responding to conservative management.

Much discrepancy exists in the available literature as regards to the location of the anal fissure with the traditional teaching of Goligher's rule stating that 90% of the fissures are in the posterior midline where the skeletal muscle fibers that encircle the anus are weakest. The next most frequent is midline anteriorly where 10% of

fissures occur. Less than 1% occurs simultaneously in the anterior and posterior positions.[1,9]

But in many studies anterior fissures have been reported to be more common.[6,7,11-13] So we carried out this survey in order to find out different locations of anal fissures in patients presenting to us with anal fissure.

METHODOLOGY

All consecutive patients aged 18 years or above, presenting with anal fissure in the surgical out patient department from January 2007 till December 2008 were included. The ethics committee of our hospital approved the study and a well-informed written consent was taken from all the patients for examination.

The diagnosis was based on history and physical examination including DRE, proctoscopic examination and examination under anesthesia (wherever required). Presence or absence of pain (before, during or after defecation); bleeding (before, during or after defecation); constipation; pruritis-ani; mucoid discharge and incontinence to faeces or flatus was noted. Patients were excluded if there was a history of previous anorectal surgery, other anorectal conditions (abscess, fistula and cancer), Crohn's disease, tuberculous ulcer, leukemic ulcer, HIV-related anal ulcer, concomitant first-to third-degree hemorrhoids, diabetes mellitus, presence of cardiovascular diseases, pregnancy and lactation, and fissures complicated with fistula and anal stenosis. Patients who did not give consent for the examination or in whom the correct location cannot be ascertained were also excluded.

Presence of acute anal fissure was considered if the patient presented with a history of anal pain at defecation for less than two months. Chronicity was defined as features lasting for more than 6 weeks, indurations of fissures, visible sphincter fibers at the base of the fissure and a sentinel piles. The study was designed as a single centre descriptive cross-sectional survey.

STATISTICAL ANALYSIS

The data was analyzed using SPSS 10.0 for Windows.

RESULTS

A total of 127 patients (mean age ± S.D. 38.19 ± 13.59 year, median 35 year, range 18-65 years) presented with anal fissure, from January 2007 to June 2008. Fifty nine (46.5%) patients were male and 68(53.5%) patients were female (Table I).

In 84(66.14%) patients, there was an acute fissure while 43(33.86%) patients were having a chronic fissure (Table II).

The main presenting complaints were pain before, during and after defecation (73.2%); constipation or difficulty in defecation (63.8%); PR bleeding before, during and after defecation (53.5%); pruritis-ani or perianal burning sensation (32.8%); mucoid and smelly discharge (19.7%) and incontinence to faeces or flatus (18.9%) (Table III). The different locations of anal fissure noted showed that quite a greater proportion of anal fissures occur at other locations other than posterior midline in both genders.

DISCUSSION

In this study there is an almost equal distribution of patients by gender, similar to previous reports.[14,15] In a study done in Rawalpindi, the mean age of the patients was 31 years with a median of 34 years. These 90.66% patients were male and 9.34% were female. In 88%, the fissure was located posteriorly, 6.66% had anterior fissure while 4 patients 5.33% were having both anterior and posterior fissure.[6] Majority of patients get this problem in third and fourth decade of life[2] (Table I).

Ammari in a study reported anal fissure in 56% women and 44% men of his study population. Of these, 55% of the females had posterior, 34% had anterior, 5% had both anterior and posterior, 3% had both anterior and

Table I. Age and sex distribution of total patients with anal fissure (n=127)

Age (Years)	Male (No. %)	Female (No. %)	Total (No. %)
18-27 Years	14 (11.02)	16 (12.60)	30 (23.62)
28-37 Years	30 (23.62)	13 (10.24)	43 (33.86)
38-47 Years	12 (9.44)	6 (9.44)	18 (14.17)
48-57 Years	--	21 (16.54)	21 (16.54)
> 58 Years	3 (2.36)	12 (9.44)	15 (11.81)
Total	59 (46.5)	68 (53.5)	127 (100)

Presenting Complaints	Present		Absent	
	No.	%	No.	%
Pain before, during, after defection	93	73.2	34	26.8
Constipation	81	63.8	46	36.2
PR bleeding	68	53.5	59	46.5
Pruitis-ani/ peri-anal burning	41	32.3	86	67.7
Mucoid discharge	25	19.7	102	80.3
Incontinence to faeces or flatus	24	24	103	81.1

Table II. Presenting complaints in patients with anal fissure (n=127)

lateral and 3% had simultaneous posterior and lateral fissures.[15] While in males, 78% of fissures were in posterior midline, 13% anterior midline, 5% simultaneous anterior and posterior and 4% in simultaneous anterior and lateral positions.[15] In one series, 87% of acute anal fissures were in posterior midline and 13% in anterior midline.[4] Hananel reported that fissures are predominantly located in the posterior midline, but 25% of women and 8% of men were having anterior fissures.[17]

CONCLUSION

Anal fissures occur more frequently in anterior midline than is being traditionally reported.

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Table III. Different locations of Anal Fissure

Location			Male		Female	
	No.	%	No.	%	No.	%
Posterior	60	47.2	36	61.01	24	35.29
Anterior	27	21.3	12	20.34	15	22.06
Anterior + Posterior	27	21.3	3	5.08	24	35.29
Lateral	3	2.4	3	5.08	--	--
Multiple	6	4.7	3	5.08	4.41	4.41
Anterior + Lateral	2	1.6	2	3.39	2.94	2.94
Posterior + Lateral	2	1.6	-	--	--	--
Total	127	100.0				

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