TO DETERMINETHE EFFECTIVENESS OF LATERNAL INTERNAL SPHINCTEROTOMY IN THE TREATMENT OF CHRONIC ANAL FISSURE IN TERMS OF RECURRENCE

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ABSTRACT

Objective: To determine the effectiveness of lateral internal sphincterotomy in the treatment of chronic anal fissure in terms of recurrence.

Type And Place Of Study: This is a Prospective descriptive type of study and was conducted at Surgical department of Hayatabad Medical Complex, Peshawar.

Duration Of Study. It was conducted from1st February 2011 to 31stJanuary 2012.

Patients And Methods. In this study a total of Fifty (50) patients with anal fissure were admitted through OPD.They all underwent lateral internal sphincterotomy (closed or open)after elective surgery. They were discharged 48 hours after surgery and the follow up was at 2nd week, 2nd and 6th months postoperatively. Patient's symptoms and local anal finding were noted questionnaire at each follow up.

Results: The Mean age of the patients at the time of presentation was 32.5(16-41) years; male to female ratio was 2.5:1. Pain persistedin 10%(5) of patients. Bleeding was present in 8%(4),wound infection was in 10% (5) of patients and recurrence of fissure was present in 6% (3) of patients. Also flatus incontinence and mild fecal soiling were present in 6%(3) and 10%(5) of patients respectively.

Conclusion: Lateral internal sphnicterotomy is the quick and effective method of management for chronic anal fissure regarding improvement of symptoms with low recurrence rate.

Key Words: Anal canal, anal canal tear, anal skin tag, hypertrophied anal papille, hypertonic anal sphinter, sphincterotomy.

INTRODUCTION

An anal fissure is a painful linear tear in the Squamous epithelial mucosa of the anal canal between the dentate line andano-cutaneous junction.[1,2] Majority of anal fissures are acute and only involves epithelium. There is little inflammatory induration or edema of its edges with accompanying spasm of anal sphincter muscle[1]. The contraction of internal anal sphincter (IAS) following bowel movements pulls the edges of fissure apart and prevents its healing. Unhealed fissure deepens through the layers of anal mucosa, becoming infected and develops into chronic fissure.[3,4] The fissure failing to heal within four to six weeks is called chronic anal fissure (CAF) which involves the full thickness of anal mucosa. [4, 5]

Anal fissure is the commonest painful anal condition, affecting all age groups particularly young and healthy adults with high incidence in males[2, 5]. The exact etiology of anal fissures is unknown, but the triggering factor is thought to be trauma from the passage of hard stools or painful bowel movements i.e repeated episodes of diarrhea.[6] Occasionally endoscopic procedures like Colonoscopy can result in sufficient trauma to produce a fissure[7]. Low fiber diets such as those lacking in raw fruits and vegetables, are associated with the development of anal fissures[3,5,6]. A study suggests that it is the deficiency of nitric oxide in the IAS which causes persistent spasm and results in ulcer formation[8]. No occupations are associated with a higher risk for the development of anal fissures. Prior anal surgery like hemorrhoidectomy in which too much skin is removed, resulting in anal stenosis and tearing of the scar when a hard motion is passed can lead to fissure formation[1]. During childbirth 11% of women develop anal fissure.[4]

The differential diagnosis includes Pruritusani, anal cancer, leukemia,crohns disease, tuberculosis(TB), acquired immune deficiency syndrome (AIDS), gonorrhea and chlamydia[7]. Sexual abuse should be considered in the differential when evaluating patients with anal or genital complaints. Other painful perianal condition includes intersphincteric abscess, fistula or acute thrombosed hemorrhoids[6].

MATERIAL AND METHODS

This study was conducted at Surgical department

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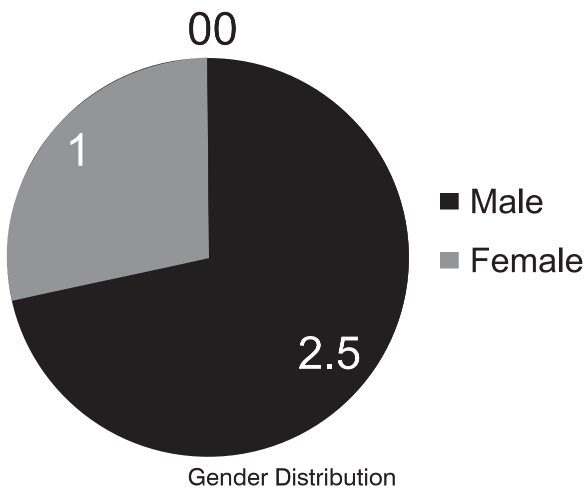
of Hayatabad Medical Complex Peshawar from 1st February 2011 to 31stJanuary 2012. In this study, Fifty (50) adult patients of either gender with anal fissure were included by convenience sampling technique from those came through OPD for anal pain after detailed clinical history, local clinical examination and specific relevant investigation where and when required to fulfill the inclusion and exclusion criteria. The inclusion criteria were adult's patients of either gender who were above 12 years of age with an anal fissure. The exclusion criteria was those having associated diseases like Inflammatory bowel disease, diabetes, hypertension, tuberculosis,other anal diseases like hemorrhoids, fistula in ano, abscess and any malignancy of intestine. Pregnant women were also excluded from the study.

After taking an informed consent, investigations such as complete blood count, urine R/E, RFTs, LFTs and Serum electrolytes were done in all patients. They then underwent lateral internal sphincterotomy (closed or open)after prepared for surgery. They were discharged 48 hours after surgery and were advised to follow up at 2nd week, 2nd and 6 months postoperatively. Patient's symptoms and local anal finding were noted in proforma at each follow up.

RESULTS

The Mean age of the patients at the time of presentation was 32.5(16-41) years and male to female ratio was 2.5:1. Pain persist in 10 %(5) of patients. Bleeding was present in 8 % (4), recurrence of fissure was in 6% (3) of patients. Flatus incontinence and mild fecal soiling were present in6%(3) and 10%(5) of patients respectively as shown in table 1.



Gender Distribution

table 1.

cpmplications	no of patients	%age
pain (48 hours)	05	10%
bleeding (48 hours)	04	8%
flatus incontinance (48 hours)	03	6%
fecal soiling (2 weeks)	05	10
recurrance of anal fissure	02	04%

DISCUSSION

The reason underlying the non-healing nature of anal fissures is thought to be due to ischemia of the affected area secondary to spasm of the internal sphincter. Various studies have demonstrated increased resting tone in the internal anal sphincter in patients with anal fissures which is thought to decrease the perfusion to the fissure lesion and delay healing. Treatment of anal fissure is therefore directed towards reducing the sphincter resting tone and consequently increasing perfusion. This relaxation can be achieved via pharmacological or surgical means. The recognition that nitric oxide was an Inhibitory neurotransmitter regulating sphincter tone lead to the development of glyceryl trinitrate (GTN) ointment which can achieve healing in 70–80% of acute anal fissures[,6]. Other pharmacological agents are also used such as calcium channel blockers[9,10], α-adrenoreceptor antagonists and botulinum toxin.[6.]

However the problem with these agents are poor compliance, delayed healing, persistence of pain and total failure of healing in 20-30% of cases which compel the patient for surgery.[4]

In this study the pain was significantly but not completely reduced in all patients at day first post-operative which exactly coincides with the study done on 246 patients by Liratzopoulos et al from 1981 to 2004, at the deprtement of surgery, University general hospital Alexandrroupolls,Greece, in which pain was significantly reduced in all patients at day first post operative.[12] In this study the pain was completely relieved in 97.1% of the patients at 2nd day post operative using visual analogue scale (VSA) for pain measurement. This study thus closely coincides regarding relief of pain, with that done on 100 patients, underwent lateral internal sphincterotomy for chronic anal fissure from 2001-2003 conducted at Surgical Department, Sir Ganga Ram Hospital, Lahore by Muhammad Saleem Arshad, Aamer Zaman Khan et al, shows among 100 patients 56 patients (56%) were free of pain within 24 hours and 42 patients (42%) had no pain after 48 hours[,13].

This study shows 94.3% of fissures were healed at the end of 6th week postoperativly.Healing of fissure in other studies reported, showed 97-100% with different follow up periods[12-16]. The percentage of healing of fissure in this study coincide with that of the others as shown in the comparative studies table 2. Some other coinciding figures regarding fissure healing are also given in the same table.

The smaller difference between my study and other studies reported regarding healing of fissure is due to difference of follow up period that is the shorter

TABLE 2.COMPARISON OF IMPROVEMENT OF VARIOUS SYMPTOMS OF VARIOUS STUDIES.

Different studies	Recurrance of fissure (6 weeks)	Pain Relief (2 days)	Flatus incontinence (1 month)	Fecal soiling
THIS STUDY	2%	97.1%	6%	10%
Liratzopoulos et al[12]	3.5%	96%	3%	15%
Saleem et al[13]	3%	98%	5%	12%
Sutton et al[14]	3%	96.5	4%	13%
Mente B et al[15]	2%	97%	3%	17%

time period for the follow up in my study. Another reason for the some difference in the figures between my study and other reported studies regarding healing of fissure is the fact that most of the patient belong from rural area ,where proper bathroom system is lacking. People use to defecate outside in the farmyards. After defecation they clean their selves with dry mud. With this, that area is rubbed which prevent fissure to heal and the wound become more prone to infection. This was the reason of local wound infection which leads to persistence of the symptoms in two patients of this study.

This study also shows that the bleeding per rectum ceased in 97.1% at 6th week postoperative. No study or data available which specifically mention these two variable after lateral internal sphincterotomy for Chronic anal fissure.Most of these studies just concentrate over pain relief and healing of an ulcer which has already been discussed. Most of such type of studies reported overall satisfaction of the patients regarding improvement of symptoms including constipation relief and stopping of bleeding per rectum[17-19]. My study shows overall satisfaction of the patients to be 95% which coincides with other studies.

Local wound infection occurred in four (5.7%) patients which cause persistent of symptom in two out of these four patients i.e. pain, constipation and bleeding per rectum and non-healing of an ulcer in all four patients.

CONCLUSIONS

Anal fissure is the most common painful anal condition.

Among surgical treatment for anal fissure, lateral internal sphincterotomy (closed or open) is the procedure of choice.

It is quick and effective procedure regarding improvement of symptom and healing of fissure.

After lateral internal sphincterotomy, future constipation & recurrence of ulcer can be avoided by prescribing the patients stool softeners, fiber supplementation and were advised them about maximum intake of vegetables rather meet, and drinking plenty of water.

Fecal soiling & incontinence is avoided by good surgical hands.

A very small risk of infection and some pain after lateral internal sphincterotomy can greatly be overcome by antibiotics and local analgesic cream.

RECOMMENDATIONS

It is recommended to the General surgeons to treat the patients of anal fissure with lateral internal sphincterotomy as the recurrence of anal fissure is less than 10%[20] is the procedure of choice for Anal fissure.

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