LATERAL INTERNAL SPHINCTEROTOMY
AN EFFECTIVE OPTION IN THE TREATMENT OF CHRONIC ANAL FISSURE

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ABSTRACT...Objective: To observe the prevalence of anal fissure, and outcome of open lateral internal sphincterotomy in terms of symptomatic relief, fissure healing and complications of procedure in female population. **Study Design:** Cross sectional, Prospective interventional. **Setting & Duration:** Surgical Unit DHQ (Teaching) Hospital Rawalpindi, Women Medical Complex Sialkot over a period of seven years from 2003 to 2010. **Methodology:** Female Patients with chronic anal fissure with history of failed conservative treatment were included in the study after taking informed consent. All patients were evaluated and managed by consultant General Surgeon and were subjected to open lateral internal sphincterotomy (LIS). **Results:** Two hundred and seventy three female patients of mean age of 39.5 years with chronic anal fissure and history of failed / noncompliance to conservative treatment were enrolled in this study. All patients underwent open lateral internal anal sphincterotomy. Post operatively had excellent recovery, were ambulant on same day. Minor complications were noted in 44 patients (0.16%). Moderate pain at operation site was the commonest complication seen in 32 patients (0.11%). No major complication like permanent incontinence of flatus and feces or recurrence was reported in any of the patients. **Conclusions:** Lateral internal sphincterotomy remains an effective treatment for chronic anal fissure in the hands of experienced surgeon with highest patient satisfaction, and should be considered as the first line therapy in chronic and resistant / recurrent acute anal fissures.

Key words: Anal Fissure, Painful Bleeding Per Rectum, Lateral Internal Sphincterotomy

INTRODUCTION

Anal fissure is the most common cause of severe anal pain[1]. A fissure is a split in the lining of distal anal canal[2]. It is a common benign peri anal condition presenting with pain which is intolerable and always disproportionate to the severity of the physical lesion. The pain may be so severe that patient may avoid defecation for days together until it becomes inevitable. This leads to hardening of the stool which further tears the anoderm during defecation setting a vicious cycle[1].

The constipation is the primary and sole cause of initiation of fissure[1]. Passage of hard stool, irregularity of diet, consumption of spicy and low fiber diet, faulty bowel habits, can contribute in the formation of the anal fissure[3].

The commonest site of development of an anal fissure is in the mid line posteriorly of the anal verge. The anoderm is more adherent to the underlying muscle at this point; secondly the blood supply of this region is also scanty[1].

Treatment of the anal fissure is conservative to start with. Measures like warm water sitz bath, adequate analgesia, stool softening, high fiber diet, and use of bulk forming laxatives all helps in the healing of anal fissure[4]. Pharmacological anal sphincter relaxants like topical application of 0.2% Glyceryl Trinitrate ointment (GTN), directly to the internal sphincter are proved to be effective in symptomatic pain relief and healing of anal fissure[4].

Unfortunately, many patients cannot tolerate the adverse effects of GTN, often limiting its use[5]. Nifedipine ointment has been used in clinical trials[1,6]. It is thought to have similar efficacy to GTN ointment but with fewer adverse effects but the risk of late recurrence remain uncertain[1,6]. A newer therapy for acute and chronic anal fissure is Botulin toxin (BOTOX)[1]. The toxin is injected directly into the internal anal sphincter and in effect performs a chemical sphincterotomy. The effect lasts approximately three months, until the nerve endings regenerate. This 3 month period may allow acute fissures and some time chronic fissures to heal and symptoms resolves. There is a usual recurrence after three month period.

Lateral sphincterotomy is currently the standard surgical treatment for anal fissure[3,7]. Traditional manual dilatation has been commonly used to reduce the anal tone of the internal anal sphincter, but it carries risk of irreversible impairment of anal continence[1,6]. In this prospective study we are sharing our experience of open lateral

internal sphincterotomy in female patients with reference to symptomatic relief, fissure healing and recurrence in female population.

MATERIAL AND METHODS

This is a prospective, descriptive study was conducted at District Headquarters (Teaching) Hospital Rawalpindi, and Women Medical Complex Sialkot from January 2003 to December 2010. DHQ Hospital Rawalpindi is a tertiary care teaching hospital affiliated with Rawalpindi Medical College, Rawalpindi. Women Medical Complex Sialkot is a 60 bedded privately based hospital exclusively for female patients.

Two hundred and seventy three (273) female patients with anal fissure with history of failed conservative measures were registered during the study period. All female patients presenting in out patient department of the hospital with peri-anal symptoms were examined by female Consultant Surgeon. Diagnosis of anal fissure was made on history and clinical examination. Digital rectal examination and Proctoscopy was not performed due to intense pain. Fissure was labeled 'chronic' when there was history of symptoms lasting more than eight weeks, presence of sentinel pile, and or visibility of horizontal muscle fibers at the base of fissure.

Patient was prepared for lateral internal sphincterotomy (LIS) by open method under general anesthesia in lithotomy position through 0.5 cm to 1 cm incision at 3 o' clock position in the inter-sphincteric plane. The internal sphincter is then looped on an artery forceps and brought up into the incision. The internal sphincter is then cut under direct visualization. A gap can then be palpated in the internal sphincter through the anal mucosa. Skin wound was left open and covered with antiseptic dressing without packing. Patients were kept in hospital for 24 hours and discharged on oral analgesics like Tab. Ibuprofen 400mg thrice a day, sitz bath, laxatives, and advised to take plenty of fluids and high fiber diet. Patients were followed up weekly in surgical out patients department for four weeks and then three monthly for six months with special reference to symptomatic relief, wound healing / discharge, incontinence of stools, flatus and recurrence of symptoms. All the data was recorded, compiled, analyzed and results formulated.

RESULTS

A total of 273 patients with anal fissure who underwent lateral internal sphincterotomy were included in the study. All the patients were female of age ranges from twenty to sixty year with mean age of 39.5 years. The median operative time was 09 minutes. Age distribution is given in Table I.

Table-I. Patients age group

Age group	No. of patients	%age
20 to 30 yrs	63	23.07%
31 to 40 yrs	143	52.38%
41 to 50 yrs	54	19.78%
51 to 60 yrs	13	4.07%

All the patients were examined and treated by the same female General Surgeon. 183 (67.03%) patients had history of pregnancy or recent child birth. 249 patients (91.08%) gave history of taking some sort of treatment by General Practitioner, Hakeem, Traditional Healer, and Home Remedies. 136 (49.81%) patients had taken treatment from lady doctors and Gynecologists. None of patients have reported to be seen by General Surgeon, either male or female. 253 (92.67%) patients out of total 273 were reluctant to be examined by a male doctor.

Constipation was the predominant predisposing factor seen in 221 (80.95%) cases. Pain (100%) was the leading presenting complaint followed by bleeding per rectum in 179 cases (65.56%). Fissure was located in midline posteriorly in 261 (95.60%) patients where as in 12 (04.39%) patients it was noted at midline anteriorly. Clinical presentation and finding are given Table II.

Associate pathology was seen in 94 (34.43%) patients. Hemorrhoids of different degrees were the commonest associated pathology found in 73 (26.73%) cases. In two patients carcinoma of anal canal was found as incidental finding (0.73%).Detail of associated pathology is given in Table III.

Post operative pain at operation site was the major complaint seen in 32 patients (11.72%) during first 24 hours. 9 patients (3.29%) developed loss of control over

Table-II. Clinical presentation

Clinical presentation	No. of patients	%age
Pain	273	100%
Bleeding PR	179	65.56%
Itching	132	48.35%
Perianal soiling	109	39.92%
Abscess	39	14.28%
Sentinel pile	259	94.87%
H/O recent child birth	183	67.03%

Table-III. Associated peri-anal pathology

Associated pathology	No. of patients	%age
Hemorrhoids	73	26.73%
Peri anal abscess	19	06.96%
Anorectal malignancy	02	0.73%

Table-IV. Complications

Complication	No. of patients	%age
Bleeding wound site	03	1%
Pain wound site	32	11.72%
Poor control flatus	09	3.29%
Fecal incontinence	-	-

passage of air, which settled over six weeks. None of patient developed incontinence either for air and feces. There is no recurrence noted over a period of one year.

Details of complications are given in Table IV.

DISCUSSION

Anal fissure is a common peri-anal pathology being seen in patients presenting in surgical out patient department. Anal fissure is a disease that causes considerable discomfort, loss of working days and reduction in quality of life. This disease is predominately seen in male population[2,8]. In our study we are sharing our experience of this disease in female population with reference to predisposing, precipitating factors and outcome after lateral internal sphincterotomy. In our study all patients were evaluated, managed and followed up by Female Consultant Surgeon. Most of the patients of anal fissure reported to us had taken advice, treatment from General practitioners, Homeopaths, Hakeem's, Traditional Healers before presenting to Surgical Specialist. None of the patient had ever visited to a General Surgeon. 136 patients out of 273 have taken treatment from lady doctors / Gynecologist. We observed that female patients were reluctant to be examined by a male doctor due to social and religious norms. It has been observed that the hakims, homeopaths, traditional healers always diagnose and treat every case of rectal bleeding as "Hemorrhoids". Most of the General practitioners and gynecologists also remained unable to diagnose, and differentiate between different peri-anal pathologies.

Most of the patients were of child bearing age group. History of recent child birth and or pregnancy was the major predisposing and precipitating factor after chronic constipation[1]. It has been observed that change in dietary habits and increasing size of the uterus during the last trimester of the pregnancy may be the one of the precipitating factor of chronic constipation which is known most common cause of development of anal fissure. We found that Hemorrhoids of different degrees was the most frequent associated pathology that is mostly seen in patients with H/O recent child birth. Ano-rectal carcinoma was found as incidental finding in two patients (0.73%), which indicates the importance of digital rectal examination in every patient with peri anal pathology and rectal bleeding.

All patients were managed with open lateral internal sphincterotomy, which now can be considered as most effective treatment of chronic anal fissure where conservative measures failed[2,9]. A recent comparative study of lateral internal sphincterotomy versus local 0.2% glyceryl trinitrate (GTN) ointment for the treatment of chronic anal fissure showed that surgical sphincterotomy was significantly more effective in providing pain relief and fissure healing[5,8,10]. There are substantial problems with compliance in patients with ointment group[8,10]. Considering early symptomatic relief, rapid fissure healing and better patient compliance, surgical sphincterotomy is the treatment of choice for chronic anal

fissure. No permanent loss of flatus and fecal incontinence was seen in this study and similar observation was made in another local study[2]. Lateral internal sphincterotomy is one of the most favored procedures. The reasons for this are the simplicity of the procedure, minimal anesthesia requirements, and good results. The complications that can arise due to the procedure are formidable; but with carefull and experienced hands these could be effectively handled and the procedure could be made safe and simple[3].

CONCLUSIONS

Lateral internal sphincterotomy remains an effective treatment for chronic anal fissure in the hands of experienced surgeon with highest patient satisfaction, and should be considered as the first line therapy in chronic and resistant / recurrent acute anal fissures.

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