ORIGINAL ARTICLE

Anal Fissures - Open Lateral Internal Sphincterotomy

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ABSTRACT

Aim: To investigate the results of this procedure in terms of recurrence rate, complications and patientsatisfaction.
Study design:-Retrospective study.
Place of study:-Department of Surgery, Nishtar Hospital, Multan.
Duration of study:-From January 2015 to December 2015.
Methods: The medical records of 80 patients from 4 centers were collected during 20 months and evaluated retrospectively.
Results: Incontinence was observed in 2(2.5%) patients. The patients were discharged at the same day of the operation. Duringthe average follow-up of 24 months, 2(2.5%) patients developed recurrent disease. In addition, patients' satisfaction was high (95%).
Conclusions: Lateral internal sphincterotomy is the procedure of choice for chronic anal fissure because it relieves symptomsand heals the fissure in nearly all patients with very low rate of complications, negligible recurrence and good patient satisfaction.
Keywords: Lateral internal sphincterotomy, Incontinence, Anal fissure.

INTRODUCTION

Anal fissure is a linear tear in the skin of the distal analcanal below the dentate line. It is a common condition affectingall age groups particularly young adults. Men andwomen are equally affected. The pain is often severe andmay vary from few minutes to several hours[1]. Chronicanal fissures associate with persistent hypertonia and spasmof the internal anal sphincter but its mechanisms is unclear.Bowel movements result in more pain and more anal spasmleading to decreasing blood flow to the area, and the cyclepropagates. Combination of these factors with internal analsphincter hypertonia explain poor wound healing and pain associatedwith chronic anal fissures[2,3]. Treatment strategiesare aimed at interrupting this cycle to promote healing of thefissures[4]. Classic treatment is to reduce the anal tone and eliminate sphincteric spasm. These findings suggest that theanal spasm may predate the onset of the fissure. The internalsphincter spasm is probably not secondary to pain as the application of topical local anaesthetic to a fissure alleviates thepain but does not reduce the anal spasm[5]. The increase inanal sphincter muscle pressure results in a decrease in bloodflow to the site of the injury, thus impairing healing of thewound. It has been reported that in elderly and postpartumpatients anal fissures are associated with normal and even hypotonic sphincters[6].

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Despite the advent of new modalities in the conservativetreatment of chronic fissures, they frequently need surgical treatment. Several surgical methods are accepted for thetreatment of chronic anal fissures. The most popular one isanal dilatation while recently lateral sphincterotomyismore promising. This is a minor operation, which is usuallydone as day case surgery[7].Early sphincterotomy withgenerous division of the internal anal sphincter muscle arerecommended[8]. The objective of the current study is toevaluate the results of this procedure in terms of recurrencerate, complications and patient satisfaction.

PATIENTS AND METHODS

This retrospective study was conducted at Department of Surgery, Nishtar Hospital, Multan from January 2015 to December 2015. A total of 85 patients were reviewed retrospectively using structured interview questionnaire which included information on socio-demography of the patients, complications, recurrence of the disease and patients satisfaction. Five patients were excluded from the study because of missed information; the remaining 80 patients underwent complete analysis.

Lateral internal sphincterotomy done with the patient underregional or general anesthesia in the lithotomy position bya standard open technique, which included 5-mm incisionstarting from right side of the anus into the perianal skin along the intersphinteric groove. The internalanal sphincter was then dissected and a segment withdrawnwith a pair of artery forces and divided with diathermy.

Theprocedure involves division of the internal anal sphincterlaterally[9].

From its distal most end up to the dentateline, or for a distance equal to that of the fissure[10]. Thesphincter was divided in an open (through a radial or circumferentialincision) fashion. Wound left open to heal bysecondary intention[11]. Sentinel skin tags, fissure edges andbed were removed (fissurectomy), and rarely combined with hemorrhoidectomy. The operation takes less than 20 minutes.The surgery is performed as an outpatient, same-day procedure[12]. The researchers then contacted patients by phone,letter or home visit to request a meeting with the researchersfor the purpose of obtaining informed consent. Followingconsent, socio-demographic data and history of various exposureswere collected using a structured interview which isresearcher-administered and anthropometric measures were conducted.

Data was collected and coded. The collected data were reviewedand analyzed using the SPSS. Descriptive statistics was usedto describe the study sample.

RESULTS

The study included 19 males (23.7%) and 61 females (76.3%) with a mean±SD of age of 31.09±7.77 years (range, 20 to 62 years). 60 patients (75%) presented as chronic and 20 patients (25%) presents as acute anal fissures. The distributionof patients in according to demographic characteristicsand return to work and are given in Table 1.

Postoperative complications are shown in Table 2, which were recorded during 24 months of follow-up. The patients were discharged at the same day of the operation.

Table-1: Main demographic characteristics

Characteristics	No. of cases	Percentage
Sex		
Male	19	23.7
Female	61	76.3
Married		
Yes	66	82.5
No	14	17.5
Presentation of the disease		
Yes	65	81.2
No	15	18.8
Bleeding		
Yes	56	70.0
No	24	30.0
Pain		
Yes	62	77.5
No	18	22.5

Table 2: Postoperative complications

Characteristics	No. of cases	Percentage
Bleeding		
Yes	12	15.4
No	68	84.6
Pain		
Yes	14	17.5
No	66	82.5
Recurrence		
Yes	02	02.5
No	78	97.5
Patients satisfaction		
Yes	77	96.2
No	03	03.8

DISCUSSION

Treatment of anal fissures by sphincterotomy was first suggestedin 1818[13]. Over the last century, a widevariety of surgical methods (anal dilation, fissurectomy and advanced flap, posterior and lateral sphincterotomy) have beendescribed for management of chronic anal fissure. Sinceits introduction, lateral internalsphincterotomy has been used with increasing frequency andit is now considered the treatment of choice for chronic analfissures[14,15,16].

The administration of pharmacological preparations that relaxesthe internal anal sphincter effectively reducing analpressure, can lead to healing of chronic fissures. However, this effect on the muscle is reversible and resting pressuresappear to return to original values once treatment is discontinued, even after the fissure has healed[9].Various medical treatmentshave been tried for managementof chronic anal fissures but none of them approached theefficacy of surgical sphincterotomy, although all patientswere free from incontinence[17]. After a followup period of six months, it was found that the rate of recurrencewas significantly higher in botulinum toxin injectiongroup[18]. Richard et al concluded that surgical sphincterotomyimproved healing rate at 6 weeks (89% vs. 29%)[18] and reduced the further requirement for surgery (3% vs. 89%)in his trial of 82 patients[19].

Precise and controlled division of the internal anal sphinctermuscle is a highly effective and commonly used method totreat chronic and refractory anal fissures, with success ratesreported to be over 90% and has a better success rate thanany medicine that is used to treat long-term anal fissures butit is associated with potential long-term complications[20,21,22].

High rate of chronic anal fissures among female patients inour study (76.3%) can be explained by

social and culturalfactors. As far as there is no female anologist in our region, female patients feel shame to consult male surgeon untiltheir condition progress to chronic fissure which then needsurgical interventions. However more studies with biggersample size are necessary to confirm this finding and exposeunderline causes.

CONCLUSIONS

Lateral internal sphincterotomy is the procedure of choice forchronic anal fissure because it relieves symptoms and heals the fissure in nearly all patients.

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