

Closed Internal Sphincterotomy in Chronic Anal Fissure: An experience at Bahawal Victoria Hospital, Bahawalpur

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ABSTRACT

Aim: To evaluate the outcome of Closed Internal Sphincterotomy in chronic anal fissure in terms of haematoma, bleeding, pain, healing rate and incontinence.

Study design: Cross sectional study

Place & duration of study: It was a conducted at Surgery Department, Bahawal Victoria Hospital Bahawalpur from January 2011 to August 2013.

Methods: Patients with chronic anal fissure were included in the study. Patients with previous Sphincterotomy, anal dilation and suspicion of malignant fissure, atypical fissure or ulcer were excluded from the study. Patients were operated under Spinal anaesthesia. All patients underwent Closed Internal Sphincterotomy. Post operative and out-patient follow-up was carried out for next 24 weeks to observe bleeding, haematoma, pain, healing rate and incontinence. Data was collected on predesigned questionnaire and analysed with SPSS – IBM version 20.

Results: A total of 100 closed internal sphincterotomies were performed. Ninety patients (90%) were successfully followed-up at 2nd, 6th, and 24th week. Pain was significantly reduced in all patients during first a few postoperative hours, while bleeding and irritation were reduced in most patients (94%) by the morning of 2nd postoperative day. Complications of surgery comprised small haematoma in 2(2%) patients by 2nd postoperative day, pain lasted for 5 days in 1(1%) patient only and bleeding was also observed in 1(1%) patient.

Conclusion: Closed lateral internal sphincterotomy for treatment of chronic anal fissures remains the method of choice, as it is a safe and effective procedure that leads to quick symptomatic improvement.

Keywords: Anal fissure, closed internal sphincterotomy, chronic anal fissure

INTRODUCTION

An anal fissure or a fissure in-ano (FIA) is defined as a tear in the mucosa of the distal anal canal which leads to painful defecation and sometimes streaking of blood especially when passing hard stool. Majority of young adults are affected. Patients mainly present with anal pain commonly during defecation and/or rectal bleeding¹. The exact etiology is not known but certain causes include chronic constipation, tuberculosis, Crohn's disease and sexually transmitted diseases. Incorrectly performed operation for haemorrhoids also leads to development of FIA. The management of FIA includes conservative and surgical. The conservative approach is based on avoidance of constipation by local application anaesthetic (e.g., lignocain 5%) gel or ointment, chemical Sphincterotomy by application of topical glyceryl trinitrate and Diltiazim creams and improper use of anal dilators. Surgical options for FIA include manual anal dilatation, botulinum toxin injection, Sphincterotomy and fissurectomy². Since the

introduction of posterior internal sphincterotomy by Eisenhammer in early fifties,³ the procedure has been used with increasing frequency and is now considered the treatment of choice for anal fissure. Notaras⁴ is known for coining the much safer lateral subcutaneous internal sphincterotomy. It results in quick healing of chronic fissure in ~95% of fissures and healing completes by the end of sixth postoperative week⁵ and it has a low recurrence rate⁶; two large studies have demonstrated a 2.3-3% failure rate at five years^{7,8}. Subcutaneous Internal Sphincterotomy however has been associated with an overall risk of incontinence of 10% in a meta-review of surgical trials⁹.

The current study was performed to determine rate of healing and rate of complications e.g. the haematoma development, bleeding, pain, and incontinence in chronic fissures after subcutaneous lateral internal sphincterotomy under spinal anaesthesia.

PATIENTS AND METHODS

It was a cross sectional study conducted at the all four surgical units of Surgery Department, Bahawal Victoria Hospital Bahawalpur from January 2011 to

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August 2013. This study included 100 patients undergoing lateral (subcutaneous internal) closed sphincterotomy for chronic (≥ 6 weeks symptoms duration) anal fissure. Patients with previous Sphincterotomy, anal dilation and suspicion of malignant fissure, atypical fissure or ulcer were excluded from the study.

All patients were evaluated for symptoms and had all necessary investigations already done. Patients were seen in the pre-anaesthesia clinic and bowel was optimally prepared a night before surgery. Lateral (subcutaneous internal) closed sphincterotomy was performed with the help of a short stab incision and blind division of the internal sphincter guided by the surgeon's finger. All operations were performed by consultant or senior residents under consultant supervision. Analgesia was provided on patients required need (PRN) in the form of intramuscular Diclofenac Sodium followed by oral analgesia, stool softener and locally applying 5% lignocaine gel. Intravenous Metronidazole was used as prophylactic antibiotic, the first dose was infused at the time of induction of anaesthesia and a second dose was administered eight hours post-operatively.

All data was collected on a predesigned questionnaire. The observations about clinical assessment of patients, pre-and post-operative symptoms, and post-operative complications (such as pain, bleeding, irritation, time to fissure healing) and their timing, duration and severity were recorded. Data was collected on predesigned questionnaire and analysed with SPSS – IBM version 20. The results were represented in terms of mean, percentage and ratio. No statistical tests of significance were applied as per requirement of study design and findings.

RESULTS

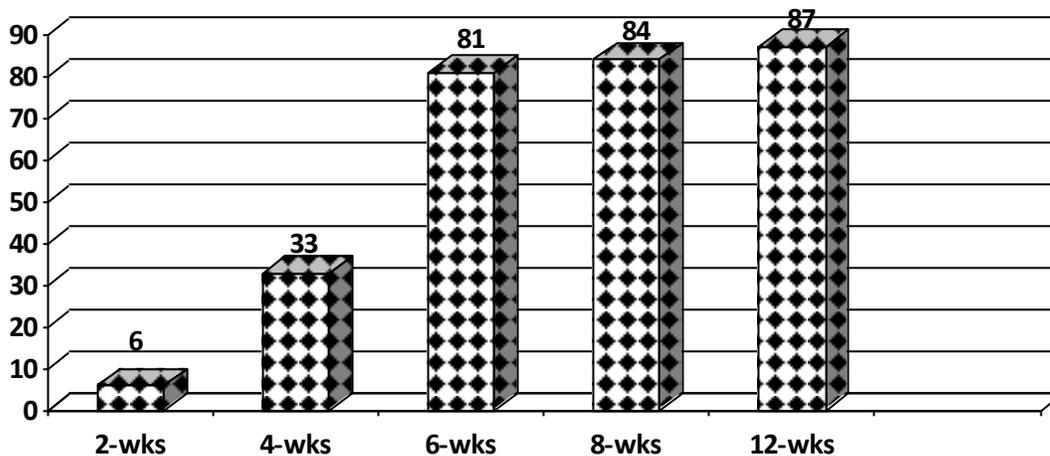
A total of 100 closed lateral sphincterotomies were performed. Mean age of patients was 36.4 ± 8.8 years. Seventy four (74%) patients were males and 26 (26%) were females thus a male to female ratio was ~3:1.

Majority (79%) patients presented with the chief presenting complaint of bleeding per rectum which was usually of small volume and occurred following defecation, usually as a streak of blood over the stool and these patients also complained of some degree of anal pain 15 (18.9%). Only three (3%) patients presented with pruritis due to discharge.

During 24 hours postoperatively, all patients experienced minimal episodic pain especially during defecation. Pain was associated with streaking of blood in 59 (59%) patients for first post-operative day. Pain was significantly reduced in all patients in the first 24 hours, while symptoms such as bleeding and irritation were reduced in most patients the next day. Post-operative pain lasted for 5 days in one patient (1%) and haematoma was also observed in one (1%) patient which subsided conservatively. One (1%) patient had a brisk reactionary haemorrhage from the sphincterotomy stab wound two hours after operation and was satisfactorily controlled by direct pressure and no blood transfusion was needed. Three patients (3.3%) experienced transitory flatus incontinence.

Fissure healing was assessed by physical examination during follow-ups in ward and out-patients department. The exact time of healing of the fissure was set at the intervals. As 10 patients were lost to the subsequent follow-ups, 87 out of 90 (96.7%) patients had completed healing of fissure by 12 weeks as shown in Fig. 1.

Fig. 1: Healing rate of fissure in-ano after closed internal sphincterotomy



DISCUSSION

In current study, the most commonly affected age group was young adults with a mean age of 36.4±8.8 years and men were found to have this condition three times more frequently than women. Melange et al. and Naha et al. have reported similar age trend about anal fissure while a recent study by Memon et al. from within the country reported that men are affected 2.6 times more frequently than women¹⁰⁻¹². Thus; the observations made about age and gender distribution of anal fissure, in current study, are in well coherence with the local and international published reports.

Regarding the presenting symptoms, current study reports that 79% patients presented bleeding per rectum during or after defecation and another 19% patients presented with pain. These findings are consistent with the observations documented by Hananel & Goden and Shafiq et al^{13,14}.

In current experience, authors have achieved high rates of anal fissures healing with almost no longterm side effects like incontinence. Healing rate was 96.7% and transient flatus incontinence was seen in 3.3% cases which is significantly lower than procedures like anal dilatation and moreover, these rates are comparable to closed internal sphincterotomy performed at renowned centers¹⁵⁻¹⁷.

CONCLUSION

In conclusion, closed lateral internal sphincterotomy for treatment of chronic anal fissures remains the method of choice, as it is a safe and effective.

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