
The Efficiency of Lateral Internal Anal Sphincterotomy by Closed Method Under Local Anaesthesia as an out Patient Procedure

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Abstract:

Introduction: Chronic anal fissure is one of the main proctological disorders encountered in surgical outpatient departments, due to its high prevalence and the discomfort involved.

Aim of the study: is to determine the efficacy of the procedure of lateral internal sphincterotomy by closed method under local anaesthesia as an outpatient procedure.

Methods & Materials: The clinical study was undertaken in all 75 patients (mean age 35 years) undergoing lateral closed sphincterotomy for chronic anal fissure (defined as anal fissure with > 6 weeks symptom duration) from June 2005 to May 2006 who admitted in Surgical OPD, Ibn Sena Hospital, Sirte region.

Results: Out of 70 studied cases, 41 patients (58.5%) were females and 29 patients (41.4%) were males. Age ranged from 16-63 years with the mean age of 35 years. Post-operatively, early complications included minor bleeding in 2 patients (3.4%) and incontinence of flatus in 5 patients (8.6%).

Conclusion: Lateral internal anal sphincterotomy by closed method under local anesthesia as an outpatient procedure has very good results in patients with chronic anal fissure who do not respond to conservative treatment.

Key words: lateral internal anal sphincterotomy. Chronic anal fissure.

Introduction:

Anal fissure results from longitudinal tear in the squamous epithelium of anal canal. Ninety percent are situated posteriorly and 10% anteriorly.¹ Chronic anal fissure is characterized by skin tag and hypertrophied anal papilla.² Though, the exact aetiology of primary anal fissure is still unknown, high resting anal pressure caused by increased internal sphincter tone appears to be the underlying pathological factor.³ There is a vicious cycle beginning from a tear in the anoderm from forceful dilatation of the anal canal during defecation exposing the underlying internal sphincter muscle that eventually goes into spasm and fails to relax during next bowel movement. Further tearing results in persistent muscle spasm leading to relative ischemia of the anoderm causing persistence of symptoms and impairment of healing. The clinical history is typically cyclical periods of acute pain are followed by temporary healing only to be followed by further acute pain. Inspection of perianal area is confirmed in diagnosis. Digital examination is usually not possible because of severe pain. Lateral internal sphincterotomy emerged as the operation of choice for uncomplicated chronic anal fissure.⁴ It has two types, open and closed. Lateral internal sphincterotomy by closed

method can be done under local anaesthesia⁵ with less postoperative period of stay and complications.⁶ So, the main aim of this study is to determine the efficacy of the procedure of lateral internal sphincterotomy by closed method under local anaesthesia as an outpatient procedure.

Patients and Methods:

A clinical study was undertaken in 75 patients (average age 35 years) undergoing lateral closed sphincterotomy for chronic anal fissure (defined as anal fissure with > 6 weeks symptom duration) from June 2005, to May 2006, those who presented to Surgical OPD, Ibn Sena Hospital, Sirte region. Among patients, 29 (41.4%) were men and 41 (85.6%) were women. A typical fissures associated with inflammatory bowel disease, cancer, or anal infections were excluded from the study. Exclusion criteria, also, were previous sphincterotomy or anal dilation and suspicion of malignant fissure or ulcer. The main ailments reported by all patients were persistent pain connected with defecation, small rectal bleedings, discharge and pruritis while in all of them conservative treatment had failed (lidocaine, hydrocortisone, glycerine

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tnmtrate, sitz bath, and luxuatives). Closed lateral sphincterotomy was performed in all cases under local anesthesia using a short stab incision and blind division of the internal sphincter guided by the surgeon's finger. All operations were performed as a day case procedure in the Surgical OPD, in Ibn Sena Hospital, with no readmissions. In this series, 58 out of 70 patients were able to be follow up on regular basis for up to 4 months postoperatively. The fissure healing was examined by physical examination during patients' clinic visits after operation. The other 12 patients were lost and that is why they excluded from the study. Postoperative stay, relief of symptoms, symptoms of incontinence, time to fissure healing and complications were examined.

Results:

- Out of 70 studied patients, 41 (58.5%) were females and 29 (41.4%) were males. Their ages ranged from 16-63 years with the mean age of 35 years. The maximum incidence of anal fissures were noted between 31-40 years. (Table-1)

Table 1: Age ranges of patients

Age (years)	Frequency	Percentage
10-20	7	10%
31-30	16	22.8%
31-40	23	32.8%
41-50	14	20%
51-60	8	11.4%
61-70	2	2.8%

- During defecation, pain was the principal symptom present in all the patients. Bleeding per rectum in 18 (25.7%) patients and perianal swelling in 10 (14.2%) patients (Table 2). The anal fissure could be seen in the posterior wall of the anal canal in 57 (81.4%) patients.

Table 2: Presenting symptoms

Symptoms	Frequency	Percentage
Pain	38	54.2%
Bleeding	18	25.7%
Perianal swelling	10	14.2%
Pruritis	4	5.7%

- Post-operatively, in early complications minor bleeding included in 2 (3.4%) patients and incontinence of flatus in 5 (8.6%) patients. (Table 3).

Table 3: Early post-operative complications of Lateral Internal Anal Sphincterotomy (n= 70)

Complication	Frequency	Percentage
Bleeding	2	3.4%
Incontinence	5	8.6%

- Twelve patients were lost and we were unable to contact them for 4 months to follow up, so we excluded them from follow up analysis. At the end of the study i.e. 4 months, 51(88%) patients were remained free from symptoms and were fully satisfied with the results of surgery, while 5 (8.6%) patients had mild persistent pain and 2 (3.4%) were recurred.

Discussion:

Chronic anal fissure is one of the main proctological disorders encountered in surgical outpatient departments, due to its high prevalence and the great discomfort involved, there were 60 patients in our study, the age range of these patients were 16-63 years with the mean age of 35 years. Thirty three percent of patients were in 31-40 years age group followed by patients in the age range of 31-40 years. Shafiqullah et al⁷ reported 32% in 20-30 years and 46% in 31-40 years age groups. Mean age reported in different studies range from 30-45 years,⁸ but Clío DY noticed that confounding effects of age, gender, body weight, and height were not significant.⁹ Among the seventy patients in our study, 57 (81.4%) patients had posterior midline fissure while 11 (15.7%) were found to have anterior midline fissure. The increased in posterior fissure support the fact that posterior fissure is more common than anterior one. Ninety per cent of acute fissures respond to conservative treatment with a fibre-rich diet and warm sitz baths. However, many persist for several weeks and may become chronic.

Conservative methods of treatment of chronic anal fissure have been proposed such as botulinum toxin,¹¹⁻¹⁶ nitrate preparations,^{10,17} and nifedipine;¹⁸ and surgical treatments such as anal dilatation,^{19,20} sphincterotomy,²¹⁻²⁴ and advanced flap.²² All these techniques aim at a high rate of healing in association with a low morbidity rate. Internal lateral sphincterotomy has been proven the procedure of choice in various comparative studies, since it exhibits the highest rate of healing associated with the

lowest indexes of incontinence. Two types of internal lateral sphincterotomy have been widely discussed in the literature: open sphincterotomy, first described in 1951 by Eisenhamer,²⁵ and closed or subcutaneous sphincterotomy, first described in 1971 by Notaras.²⁶

In all the patients in our study, lateral internal sphincterotomy was performed under local anesthesia and it followed up to 4 months. 88% patients were cured of their symptoms while only 12% the fissure failed to heal, although the symptoms had decreased in severity and the patients were not willing for further operations. Post-operative impairment of continence is not uncommon. Lewis et al²⁷ found some degree of incontinence in 17% of

their patients: in two thirds of these patients, this complication was only temporary. Khuhchandani and Keed²⁸ reported postoperative soiling in 22% and grade-1 incontinence in 35% of patients after sphincterotomy. In the present study, 8.6 % had mild soiling which resolved within 2 to 3 months. All of the above mentioned results are close to our results in term of success rate and rate of complications.

Conclusion:

Lateral internal anal sphincterotomy by closed method under local anesthesia has very good results in patients having chronic anal fissure, those who do not respond to conservative treatment.

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