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LATERAL INTERNAL SPHINCTEROTOMY;
OUTCOME AND COMPLICATIONS

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ABSTRACT... Anal fissure is a common anorectal problem, presenting with pain during and after defecation. It is associated with increased tone of the internal anal sphincter muscle. The relief of this hypertonia is the cornerstone of the treatment of the anal fissure. The surgical relief of this hypertonia is very successful in treating the fissure with minor morbidity of the procedure. **Patients & Methods:** A study was conducted in 486 patients,(344-males and 142 females,25-40 range). **Setting:** Saad Surgi-med hospital Faisalabad. **Period:** 1999 to 2007. Lateral internal anal Sphincterotomy for chronic anal fissure. The therapeutic outcome and complications of the procedure were recorded. Results: Out of 486 patients, 344 were males and 142 females.(range 25-40) The site of fissure was in posterior midline 6 O' clock in 350 patients.(m=257,f=93);Anterior midline.12 O'clock in 99 patients.(m=76,f=23);both anterior and posterior in 41 patients.(m=l 5,f=26) Eleven patients had associated peri-anal abscess and 19 patients had associated Fistula in ano. All the patients were discharged after 24 hrs with regular follow up at 1, 2,6,24 wks. 275 patients had significant relief of pain in 48 hrs, 107 became pain free in 1 wk.37 has had some pain for 2 wks. In 479 patients fissure healed in 3 months, 7 patients has had delayed healing out of which five patients required curettage of the wound under local anaesthesia which healed subsequently in next six wks. 12 patients had minor incontinence which disappeared in 4 wks. In one patient the incontinence persisted for six months then it got settled. Conclusion: Lateral subcutaneous internal Sphincterotomy is a safe and effective treatment of chronic anal fissure.

Key words: Anal fissure, Lateral subcutaneous internal Sphincterotomy, surgery.

INTRODUCTION

Subcutaneous internal sphincterotomy has replaced the anal dilatation as the surgical treatment of chronic anal fissure. Excellent healing rate and relief of symptoms is obtained with this procedure[2-4] and also it has got very low recurrence rate[4]. This procedure an be performed under GA, Spinal or local anaesthesia. The overall risk of incontinence has been shown to be 10% in review of surgical trials[5].

Different methods of reatment other that surgery are also used for the treatment of chronic fissures. These include chemical sphincterotomy with nitroglycerine, botulinum toxin or calcium channel blocker in the form of topical application[6].

The aim of this study is to find out the outcome, and complications of lateral internal sphinterotomy.

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PATIENTS AND METHODS

The study was conducted on 486 patients treated for anal fissure at Saad Surgi-med hospital Faisalabad. From Jan 1999 to Dec.2007.Out of these 344 were males and 142 were females, most of the patients were in the age group of 25-40 yrs(93%).The site of fissure was in posterior midline 6 O' clock in 350 patients. (m=257,f=93);Anterior midline, 12 O' clock in 99 patients,(m=76,f=23); both anterior and posterior in 41 patients.(nr=15,f-26).All patients were having pain during defecation .Associated perianal abscess was present in 11 patients and 19 patients were havening associated fistula in ano.

Lateral sphincterotomy was performed in all cases. Under General, spinal or local anaesthesia and the patient in lithotomy position, a small incision is given at the muco-cutaneous junction and the internal sphincter felt by the finger. Dissection is done both medial and lateral to the lower end of the sphincter and the lower third to half of the sphincter is incised with the surgical blade. The confirmation is done by feeling a dimple at the site of sphincterotomy. Excision of sentinel pile and fistulectomy where indicated was done.

Postoperative stay, relief of pain, time of healing and complications were recorded at follow up visits at 1,2,6 and 24 wks. The incontinence was assessed by a questionnaire given to the patients before surgery.

RESULTS

Out of 486 patients, 344 were males and 142 females.(range 25-40) The site of fissure was in posterior midline 6 clock in 350 patients.(m = 257,f = 93);Anterior midline, 12 O' clock in 99 patients.(m=76,f=23); both anterior and posterior in 41 patients.(m=15,f=26) Eleven patients had associated perianal abscess and 19 patients had associated Fistula in ano. All the patients were discharged after 24 hrs with regular follow up at 1, 2,6,24 wks. One patient was readmitted on second post operative day due to bleeding. 275 patients had significant relief of pain in 48 hrs, 107 became pain free in 1 wk.37 has had some pain for 2 wks. In 479 patients fissure healed in 3 months, 7 patients has had delayed healing out of which five patients required curettage of the wound under local anaesthesia which healed subsequently in next six wks. In order to evaluate symptoms of incontinence, a simple questionnaire was designed, which was based on information from the patient about the type of incontinence (for solid or liquid stool or for flatus alone) and the possible effects on lifestyle (Table I).

Table-I. Simple questionnaire for evaluation of incontinence

Did the patient experienced	Daily	Weekly	Rarely	Never
Accidental bowel leakage of gas or mucous	3	2	1	0
Accidental bowel leakage of liquid stool	3	2	1	0
Accidental bowel leakage of solid	3	2	1	0
Deterioration of life (yes/No)				

Never (no episode the past month)
Rarely (1 episode the past month)
Weekly (1 or > 1 episodes a week)
Daily (1 episode a day)
Deterioration of life Yes: 1 No: 0
Maximum score = 10: complete incontinence

Items were each allocated a numerical value based on our perceived estimation of the severity of a particular symptom, ranging from 1 to 3, with a possible maximum score of 10. This questionnaire was administered in each patient before and after operation at 2, 6, 24 and 48 weeks. In this series of patients, the assessment of fecal incontinence was based on the detailed history, the examination findings and the questionnaires' score, without the use of a formal scoring system. 12 patients had minor incontinence which disappeared in 4 wks. In

one patient the incontinence persisted for six months then it got settled.

DISCUSSION

Anal fissure is a longitudinal defect in the anal canal mucosa and anoderm which was recognized as clinical entity in 1934[8]. This is a common anorectal problem, presenting with pain during and after defecation. Anal fissure may be acute (<6wks)or chronic (> 6wks).Chronic anal fissure is usually associated with sentinel pile and hypertrophied anal papilla. Fissures with the features of chronicity (sentinel skin tag, hypertrophied papillae, fibrous polyps, exposure of the underlying anal sphincter or anal cicatrization) are unlikely to heal with conservative treatment[1,9]. Anal fissures occur in midline posteriorly in 90% cases and anteriorly in 10% cases or rarely both anteriorly and posteriorly (<l%).

The etiology of the anal fissure is not fully clear but it is associated with spasm of the internal anal sphincter[1,7,9-11] which causes ischemia of the anal mucosa. Relieving the spasm improves the blood supply and helps in the healing of the fissure[1,5,7].

Usual presentation is severe pain at the start of defecation that lasts for few hrs afterwards. The pain is usually tearing or burning in nature. Few patients may complain of bleeding per rectum along with pain. Bleeding is usually small in amount staining the stool surface or in the shape of drops after daefeacation, occasionally it may be severe.

On clinical examination, the fissure can usually be seen by gently parting the buttocks and everting the anal verge. Digital rectal examination and proctosigmoidoscopy is not recommended except under proper anaesthesia.

Most of the acute fissures can be treated conservatively with bulking agents, stool softeners, local anaesthesia creams and Sitz bath. Chronic fissures are more difficult to treat conservatively.

Most common surgical procedure performed for chronic anal fissure is lateral internal sphincterotomy which may be done by open or closed method. The main objective is to divide the lower 1 /3 to half of the internal sphincter, thus reducing the internal sphincter spasm and increase local ano-dermal blood flow.

Surgery achieves high rates of anal fissures healing with a low recurrence rate[1,4,12]. Anal dilatation results in successful healing of anal fissures. However there is no way to reliably standardize the procedure and both the internal and external sphincters can be disrupted or fragmented in an irregular manner. As a result, sphincter damage occurs in 65% of patients undergoing anal dilatation[l3], with a significantly higher risk of minor incontinence than sphincterotomy[14] (12,5% to 24.3% after anal stretch vs 4.8% after lateral internal sphincterotomy)[l3,15]. Anal dilatation has also a higher risk of fissure persistence compared with lateral internal sphincterotomy[1,16].

Lateral internal sphincterotomy is the most commonly used operative technique, which is highly efficient and succeeds in curing the fissure in 90 to 100% of patients[2-5,19].

No significant differences in the morbidity are present between open or closed method of sphincterotomy[1,2,16,20].

Some degree of anal incontinence is associated with this procedure, in some studies it is as high as 30 %[3,2] (a very high percentage which might be due to inadequate technique). According to a systematic review of randomized surgical trials the overall risk of postoperative incontinence was about 10% and this was mostly incontinence to flatus, while there are no reports delineating the duration of this problem (if it is permanent or transitory)[2,5]. Nevertheless, it is still controversial if minor degrees of incontinence could be a symptom of chronic anal fissure or the sequel of lateral internal sphincterotomy[10] Medical sphincterotomy with nitroglycerine paste, botulinum toxin or calcium channel blockers is given to treat the fissure. It seems less effective than surgery in curing the chronic fissure due to side effects and frequency of dosages[1,3,11,19,20].

In this study of 486 patients where lateral internal sphincterotomy was performed, excellent results in the form of improvement of symptoms were obtained and almost all the patients has had healing of the fissure in three months period. Post operative complications like haematoma, incontinence are minor and are present in very few patients only.

CONCLUSION

In conclusion, the lateral anal sphincterotomy is a safe and effective procedure for the treatment of chronic anal fissures that leads to excellent improvement of patients symptoms and healing of fissure with occasional impairment of continence which is transient.

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