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ORIGINAL ARTICLE

Anal Fissure Dilatation Outcome and Patient Satisfaction

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ABSTRACT

Objective: To study outcome and level of satisfaction in patients of chronic anal fissure in terms of pain control and healing of fissure.

Patients and Methods: This descriptive study was conducted in Fauji Foundation Hospital Rawalpindi. Total of 100 patients who had anal fissure for more than 6 weeks and were refractory to treatment with GTN paste were included in this study. Anal dilation was done in all the patients. Satisfaction of patient was assessed on visual analogue scale at 48 hours, 3 weeks, 6 weeks and 6 months during OPD follow up.

Results: Total 100 patients were included in the study. Among them (84%) were females, 16% were male. 3 weeks after dilatation, anal fissure was completely cured in 93% of patients. After 6 months, repetition of procedure was needed in 3% of patients.

Conclusion: Anal dilatation is a simple and safe procedure to treat chronic anal fissure.

Key words: Fissure in Ano, Rectal bleeding, Painful defecation.

Author`s Contribution
[1]Manuscript writing of introducton
[2]Reviewed and proof reading, data analysis,
[3]Data collection, analysis and help in references

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Introduction

Anal fissure is a boat shaped ulcer in anal canal and it has almost the same incidence in both sexes. Ninety percent occurs in midline posteriorly. Painful defecation and bright red bleeding are usual presenting features.[1-3] Acute anal fissure responds to tropical ointments and medical treatment but in chronic anal fissure, no improvement in the condition has been proved beneficial.[4] Chemical sphincterotomy with Glyceryl Trinitrate GTN[1] paste is intolerable to majority, as it is associated with hypotension, tachyphylaxis and headache.[5] Surgical treatments include lateral internal sphincterotomy (LIS) and anal dilatation[6], LIS is also associated with considerable risk of incontinence especially in female and elderly people[1]. Controlled gentle anal dilatation with fingers in deep neuromuscular blockade is a time-tested method which relieves pain and anal spasm within hours.[7-9] This method is acceptable for majority of patients, it also avoids wound complication and perineal sepsis which is known complication of LIS.[6,10]

Surgical treatment are far more popular than medical treatment. Literature review shows that anal dilatation was recommended by Goodsal' at the turn of the century and later by Gabriels and others.[1] Surgeons have been attracted to the procedure by its extreme simplicity[1] and hence it was most ancient way of dealing with anal fissure and is still widely practiced in different parts of world.[11] Anal dilatation is criticized in literature because it leads to tearing of internal sphincter and hence incontinence. Uncontrolled force applied in anal canal in wrong direction and use of metal anal dilators were the contributors of the failure of this procedure.

Diagnosis of anal fissure is usually made on history. The examination is very painful, especially it is impossible to

do proctoscopy. On per rectal examination, fissure can be seen at 12 O clock position. Routine hematological test are within normal range. Radiological investigations like trans rectal ultrasound & MRI are extremely useful in delineating anatomy of anal canal but again transrectal ultrasound cannot be done in acute stage, nor does it help in diagnosis or treatment. Though magnetic resonance imaging (MRI) is the best imaging modality for preoperative assessment of patients with anal fistula, its role is not established in case of fissure in ano. MRI performed adequately should be regarded as the "Gold standard" for preoperative assessment, replacing surgical examination under anesthetic (EUA) in this regard.[12] The anatomy of the anal canal is complex but well demonstrated by MRI. Understanding the anatomy is a prerequisite for determining the true site and the extent of pathology, especially for surgical work up in the case of most of the anal problems except for anal fissure. Other modalities of radiological diagnosis like PET/CT are useful in staging of carcinoma and are used routinely in anal cancer.[13]

Patients and Methods

This prospective study was performed at Fauji Foundation Hospital Rawalpindi, from June 2012 till March 2017. All the patients who had anal fissure for more than 6 weeks and were refractory to treatment with GTN paste were included in this study. Patients with any previous history of perianal procedure or operation and suffering from any other pathology like Hemorrhoids, Peri-anal fistula, Crohn's disease, Ulcerative colitis and Tuberculosis of gut were excluded from the study. The patients were informed about the procedure and formal written consent was taken. Anal dilatation was performed by the surgeon under general anesthesia. First, per rectal examination and proctoscopy was done. Anal dilatation with the gentle traction of four fingers by crossed hands was done in lateral direction. Hands were crossed to avoid extra force. Dilatation was not done in an upward or downward direction to avoid damage to the perineal body. A vaseline and lignocaine soaked gauze was placed in anal canal for 2 hrs. One dose of IV analgesic was advised. Patients were discharged on the same day and called for follow up visits after 2 days. Pain and patients' satisfaction with the procedure were assessed pre operatively and post-operatively at 48 hours, 3 weeks, 6 weeks and 6 months during OPD follow up using Visual Analogue Scale. The visual analogue scale (VAS) is a simple and frequently used method for the assessment of variations in intensity of pain. In clinical practice the percentage of pain relief, assessed by VAS, is often considered as a measure of the efficacy of treatment.[14]

Results

A total 100 patients were included in the study, among them 84% were females and 16% were male. The median age was 31 years. Seventy two percent of patients had complete pain relief in 1st 48 hours, while 28% reported persistence of pain. At 3 weeks interval, fissure healing was observed in 93% patients with persistence of symptoms in 7%. During follow up at 6 weeks and 6 month, 97% of patients were symptoms free, with 3% patients reported persistence of symptoms (Table 1).

Table 1: Occurrence of post-surgical symptoms at different time intervals in patients of anal fissure (n=100)

Time interval	Pain		Fissure	
	Relief (%)	Persistent (%)	Healing (%)	Persistence of symptoms (%)
48 hours	72	28	28	72
3 weeks	100	0	93	7
6 weeks	100	0	97	3
6 months	100	0	97	3

For these 3% patients, who continued to complaint about pain during defecation or persistence of any other symptoms, same procedure was repeated. Complications like permanent or temporary incontinence, peri-anal wound infection or sepsis was not seen in any patient.

Discussion

The majority of patients had used conservative and medical treatment like GTN paste before opting for the surgery. Patients themselves opted for anal dilatation when the procedure was properly explained to them. In our study, we performed this procedure in deep neuromuscular blockade[14], gentle controlled force applied on the side of anal canal for 4 minutes. Application of these techniques lead to excellent results[15]. This procedure is easy for post graduate doctors and resident registrars to do independently without serious complication. There is no need of any specialized equipment, no fear of transmission of Hepatitis or HIV

from the hospital. The patient opted for this method of treatment because no sharp cut was made on their anal canal, no wound care was required postoperatively. Patients resumed their daily life activity from the first postoperative day.

Lateral internal sphincterotomy is compared with anal dilatation in various studies and is said to be more effective, than dilatation, but perianal sepsis and wound infection are demerits of this procedure.[16] How much sphincter is to be divided is another weakness of this procedure. One study compared the results of different sphincterotomies and found incontinence in 31 percent of patients which is quite significant.[14] Another study showed incontinence of 30 percent by sphincterotomy, which is another argument against this procedure.[15]

Female gender, age, and multiparity are other contributors to the failure of sphincterotomy, as female mechanism, any sharp injury to sphincter fibers can be a control of feces and flatus.[16] Gender suffer associated with serious continence issues. Equally physiological weakening of sphincter detrimental and study published in BMJ by steen lindker Jensen effective in immediate pain control and healing of fissure but anal dilatation is associated with recurrence, and poor compared anal dilatation and LAS and found both are As the drawback of this study was that anal dilatation was performed in local anesthesia and LAS was done in GA. Another study done by Graig P et al which was published recently in Colorectal Disease represent that both procedures are equivalent in terms of recurrence.[17] In one study on LAS and anal dilation the author reported that anal dilatation is least invasive and give better pain relief and symptoms.[18]

Conclusion

We found anal dilatation a safe, cost effective and patient preferred method for patients who suffer debilitating pain during defecation. It is not associated with any risk of sphincter injury or incontinence if performed by proper technique. Patients resumed their daily life activity from next day. There is need of more prospective randomized controlled trials to reach a conclusion.

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