

Surgical Management of Chronic Anal Fissure : Evaluation of Left Lateral Internal Sphincterotomy (LLIS)

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Abstract: A total of 118 patients were studied over 3 years period. These were the patients who did not respond to other conservative measures for the management of anal fissures. Sixty seven (66) patients were males and fifty (55) females. Age range was 18-73 years. 108 (92%) patients had posterior and 10 (8%) anterior anal fissure. One hundred and eleven (94.06%) patients were free from symptoms after LLIS and only seven patients continued to experience pain; out of these two cases had to be reoperated. LLIS is an excellent surgical procedure for patients suffering from chronic anal fissure who fail to respond to conservative treatments for anal fissure.

INTRODUCTION

Anal fissure is a very common benign anorectal disorder which is a cause of significant morbidity among otherwise healthy individuals. Chronic anal fissures are best managed by surgical intervention in the form of left lateral internal sphincterotomy (LLIS). This study was conducted to evaluate the effectiveness of this surgical procedure in patients having chronic anal fissure.

An anal fissure often starts as a tear or crack in the skin lining the anal canal which later on becomes a type of ulcer. Anal fissure is an elongated ulcer in the long axis of lower anal canal¹. A fissure most often affects young adults but it can occur at any age. Anal fissures are normally caused by constipation and straining pressure in the area. It is also common to get an anal fissure from diarrhoea, inflammation in the area and childbirth. As fissure occurs in area of anoderm which contains sensory nerves, it is often associated with severe pain. Affected patients describe a tearing pain with passage of bowel movements. The passage of stools may be accompanied by bright rectal bleeding, usually limited to a small amount on toilet paper or on the surface of stool. Anal fissure can present in two phases- acute and chronic. In an acute scenario, the patient complains of severe anal pain, conservative management is generally sufficient to heal fissure when it is very shallow. Deep anal fissures and those with underlying aetiology do not heal completely and persist for longer periods, usually for many weeks. These are characterized as chronic anal fissure with recurring symptoms of painful defecation and bleeding.

Anal fissure can be diagnosed from symptoms and by examination. The underlying pathophysiology of anal fissure is complex. It is multifactorial and involves anodermal ischaemia, infection, chronic constipation and hypertonicity of the smooth muscle of the internal anal sphincter and its elevated resting pressure. Fissures have a predilection for the posterior midline (90%) but may also be located in the anterior midline or lateral². The posterior commissure of the anoderm is less perfused than other anodermal regions. Studies have demonstrated that adult patients with anal fissures have significantly elevated anal canal pressures that exceeds the intraluminal pressure of arterioles³. Surgical management of chronic anal fissures has been accepted traditionally as an effective and standard procedure which results in healing of fissures in about 90% cases⁴. Medical therapies for management of anal fissures consist of three components: relaxation of the internal sphincter, atraumatic

passage of stools and pain relief. Topical anaesthetic creams, sitz baths, high fibre diet, stool softeners and laxatives are therapies which are successful in healing shallow ulcers. Topical nitroglycerine, oral and topical nifedipine, oral and topical diltiazem have been used and claimed to show good results however side effects and recurrence are limiting factors for compliance. LLIS is the most simple and reliable method for relieving patient problems⁵. LLIS is the gold standard treatment for chronic anal fissure⁶. The objective of the present study was to evaluate the effectiveness and long term results of sphincter healing following LLIS in the management of chronic anal fissure.

MATERIAL AND METHODS

This was a descriptive study conducted in the Department of Surgery, Government Multispeciality Hospital, Sector 16, Chandigarh over a period of three years, from November 2005 to December 2008. A total of 118 patients of chronic anal fissure were included who did not respond to conservative management. Patients with anal fissures secondary to other underlying diseases were excluded. A detailed history was recorded and general physical examination and local examination was performed. Relevant pre operative investigations were done and a written informed consent for surgery was taken.

All patients were prepared before surgery with single enema. LLIS was performed under saddle block using 0.8 ml of 0.5% Bupivacaine heavy after lumbar puncture in L4-5 interspace with spinal needle no 26. All patients were started orally two hours after surgery and were discharged within 24 hours of hospital admission. Post operatively patients were advised analgesics and sitz baths along with laxatives for a week. They were advised follow up after 1, 3 and 6 months.

RESULTS

Demographics Data

Among 118 patients in the study 67 (56.77%) were males and 51 (43.22%) females. Age ranged from 18-73 years, maximum incidence of anal fissure was noted between 31-50 years.

Presentation

Pain during defecation was the main symptom at presentation in all the patients. Pain was present for more than a month in all the patients. Constipation was present in 89 (75.42%) and bleeding per rectum in

30 (25.42%) patients. The most consistent clinical sign noted in all 118 patients was spasm of the internal sphincter. With careful examination lower margin of the fissure was seen in all patients. (Table 1).

Table 1: Clinical Presentation of Chronic Anal Tissue

Clinical features		Frequency	Percentage
Symptoms	Pain	118	100
	Constipation	89	75.42
	Bleeding per rectum	30	25.42
Signs	Sphincter spasm	118	100
	Visible fissure margin	118	100

Complications

Early post operative complications included minor bleeding in 18 (15.25%), mild soiling in 10(8.47%) and incontinence of flatus in 7(5.93%) patients. (Table 2)

Table 2: Early Post-Operative Complication of Chronic Anal Tissue

Complications	Number of patients	Percentage
Minor bleeding	18	15.25
Mild soiling	09	8.47
Incontinence of flatus	07	5.93

At the end of study after 6 months 111(94.06%) patients remained free from symptoms and were fully satisfied with the results of surgery, while only 7 (5.93%) patients had mild pain. Out of these only two patients who had refractory pain were re operated and both of these patients responded well and were symptom free after the second procedure.

DISCUSSION

There were 118 patients in our study . The age range of the patients was 18-73 years. 52.54% cases were in age group 31-40 years followed by 22.88% case in age group 41-50. Shafiqulla et al reported 46% in 31-40 years age group⁷. Cho D Y noticed that confounding effects of age, gender, body weight and height were not significant⁸. 92% cases in our study had posterior midline anal fissure while 8% had anterior midline anal fissure. Prevalence of posterior anal fissure in about 90% cases has been reported⁹. All patients in the present study presented with pain during and after defecation. Eighty nine patients (75.42%) had constipation and thirty patients (25.42%) had pain associated with bleeding per rectum. Shafiqullah et al reported 88% patients with pain⁷. Post operative impairment of continence is also seen. Lewis et al found some degree of incontinence in 17% of patients¹⁰. In their study, in two third of cases it was only a temporary problem. Khubchandani and Reed reported post operative and incontinence following lateral sphincterotomy¹¹. In our study 8% cases had soiling and 5% had mild incontinence which resolved over a period

of 6 to 8 weeks. LLIS is a better procedure as compared to anal dilatation as dilatation is associated with uncontrolled tear of internal sphincter muscle which is a cause of higher incidence of soiling and incontinence in such cases¹³. Anal spasm was seen in all cases of chronic anal fissure in our study also. We could, on examination, find lower margin of fissure in all the cases.

Khubchandani and Reed reported post operative soiling in 22% and grade 1 incontinence in 35% of patients after sphincterotomy in their series¹¹. Hsu and Mac Keigan reported no post operative soiling¹². Only about 5% cases in our study had persistent symptoms and fissure failed to heal. Two patients were re operated and were free of symptoms after second procedure. Hananel et al reported 98% success rate with a recurrence rate of 1.4%¹⁴. Littlejohn et al reported 99% healing rates with incontinence rate of 1.4% and recurrence rate of 1.4%¹⁵. Nyam et al showed a success rate of 95% but with recurrence rate of 8% and incontinence in 15%¹⁶.

Our results clearly indicate that for management of chronic anal fissure surgical management with lateral internal sphincterotomy is a better option.

CONCLUSION

LLIS is a safe and excellent procedure with high patient satisfaction rate and this procedure can safely be performed as a day care procedure.

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