Research Paper Medical Science

# Closed lateral internal sphincterotomy under local anaesthesia: A day surgery procedure

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**ABSTRACT**

*Background: Chronic anal fissure is a common anal canal disorder which is more common in females. Closed lateral internal sphincterotomy is one of the surgical options for treatment of chronic fissure in ano. It heals the fissure by decreasing anal spasm, pain and smooth defecation. Lateral internal sphincterotomy under local anaesthesia is the surgery of choice performed as a day surgery procedure.*

*Material and Method: Forty five patients suffering from chronic anal fissure were treated by closed lateral internal sphincterotomy under local anaesthesia as day surgery. Patients were followed at 1 week, 3 weeks and 3 months interval. This study was conducted with aim to see postoperative outcome of closed lateral internal sphincterotomy.*

*Results: The complete healing was achieved in all the patients in three weeks. After initial post operative pain, all the patients were pain less at one week follow up doing their routine working. On follow up two patients had haematoma; one patient had haematoma and ecchymosis. Post operative haemorrhage and incontinence was observed in none of the patients. Recurrence was observed in none of the patients.*

*Conclusion: Closed lateral internal sphincterotomy under local anaesthesia has a very good healing of chronic fissure in ano. It is concluded that closed internal sphincterotomy is the surgical procedure of choice for chronic anal fissure as day surgery.*

**KEYWORDS : Fissure in ano, Anal fissue, Closed lateral internal sphincterotomy, Day surgery**

## Introduction

Anal fissure is a break in lining of anal canal below the dentate producing a painful defecation. The anal fissure is positioned at 12'o clock in anterior part or 6'o clock position in the posterior part of the anal canal. Anterior fissure is present in 30% and posterior fissure is present in 70% of patients. A fissure can be acute or chronic, occurring more common in females particularly in post operative period. Chronic anal fissure is often associated with a skin tag at the lower end called sentinel pile.

The anal fissure is formed as a result of passage of hard stool and straining. The obliquity of anal canal results in breakdown of epithelium commonly in the posterior part below the dentate line. This results in spasm of internal anal sphincter and pain. This results in repeated breakdown of the epithelium and formation of chronic ulcer. A cycle of pain, spasm and spasm is responsible for development of anal fissure. Medical sphincterotomy using Diltizam is effective in most of patients with acute fissure but this therapy is effective only in 50-60% of patients with chronic fissure.[1]

Patients who do not respond to medical therapy are advised surgical therapy. Lateral internal sphincterotomy is the procedure of choice. With this technique healing occurs in 95% of patients with immediate pain relief.[1] This procedure can easily performed as day care surgery. It is essential to select the patients for closed lateral internal sphincterotomy. Many patients may have concurrent anorectal disease like haemorrhoids or submucous fistula. Patient consent for this procedure to be performed under local anaesthesia is essential as many patients think that anorectal surgery as a painful procedure. Also to make the patient understand that this procedure is feasible this short surgical procedure under local anaesthesia; thus avoiding hospitalization and risk of general or spinal anaesthesia.[3]

In this study local anaesthesia has been modified to local infiltration instead of bilateral pudendal block. The modification has been done to make this surgical procedure as painless and ambulatory surgery procedure instead of spinal anaesthesia and hospitalization.

## Material and method:

This study was carried out in department of surgery on forty five patients. Patients presented with pain in anorectal region on defecation. On examination the diagnosis of chronic anal fissure was confirmed. All these patients were included in this study. Lithotomy position was used during this surgical procedure. The area was prepared and draped. Closed lateral internal sphincterotomy was done under local anaesthesia. Local anaesthetic used was 1% Lignocaine. Local infiltration was used in all the patients. Local infiltration was given below dentate line to block the sensation of pain below dentate line. Using a 21-g needle the local anaesthetic was injected deep into intersphincteric space on both right and left side. The total volume of 1% Lignocaine solution used was about 20 ml. The index finger of the left hand is inserted into the anal canal. Keeping this finger in place, the intersphincteric groove and internal sphincter is felt. Using 11-no blade 5mm incision is given on the anal verge on left or right lateral side and the blade is inserted in the submucous plane. The internal sphincter is cut with sea-saw movements in the distal 1/3 only. The defect can be felt with the index finger. The anal canal packed with roll gauze which exerts counter pressure and achieves haemostasis.
Post operative pain assessment is done and requirement of analgesics is seen.

## Results:

Posterior midline fissure was present in 40 patients (89%) and rest of 5 patients (11%) were having anterior midline fissure. In all patients single fissure either anterior or posterior midline was present. Patients suffering from multiple fissures or off midline fissure were excluded from the purview of this study. Patient with multiple fissure are likely to be having inflammatory bowel disease. On digital examination, there was mild increase in sphincter tone in 16 patients (35.5%), moderate in 23 patients (51.1%) and severe in 6 patients (13.4%). Patients with severe hypertonia of anal sphincter did not permitted digital examination of anal canal. Sentinel pile was present in 32 patients (71%).

These patients in post operative period had tolerable pain in first week and were comfortable with oral analgesics. Three patients had passage of small quantity of bleeding and ecchymosis was present in one patient. There was no perianal abscess, haemorrhoidal thrombosis or urine retention. None of these patients required reporting in emergency or admission in hospital ward due to complications. Incontinence to flatus was present in one patient only that also recovered in three weeks. None of the patients had incontinence to faeces. On follow up complete healing of the wound occurred in all the patients. All the patients were back to work within one week. The follow up was done at 1 week, 3 weeks and three months. Observations were made regarding bleeding, ecchymosis, abscess, fistula and incontinence to flatus or faeces. Healing time was also observed.

## Discussion:

Chronic anal fissure is the most common proctological disorder in surgical outdoor patients. it may be associated with haemorrhoids, fistula in ano and perianal suppuration. As the fissure is present below dentate line it causes great discomfort and pain. The pain may become incapacitating after defaecation for a few hours.[ref.1,2]. Besides pain the clinical presentation is with constipation and bleeding. The posterior mid line fissure is more common than anterior mid line

fissure. Frequently a sentinel pile is seen in posterior mid line at anal verge. Men and women are equally affected in age group of 20 to 40 years. Anal fissure are more common in women in perinatal period.

Majority of acute anal fissure heal with conservative treatment like sitz, baths and fibre rich diet. Glyceryl trinitrate or Diltizam gel producing medical sphincterotomy can cure acute fissure in ano in 90% of patients.[4] However in many patients fissure becomes chronic. As there is a vicious circle of fissure – spasm – pain; to relax the internal sphincter spasm by lateral internal sphincterotomy results in healing of chronic anal fissure.[5,6] Two types of lateral internal sphincterotomy can be done: open sphincterotomy and closed sphincterotomy.[7] Kortbeek et al compared these two surgical techniques and no statistically significant differences were found in results.[8,9] Closed lateral internal sphincterotomy performed under local anaesthesia is a fast and effective technique for treatment of chronic anal fissure.[10] Various studies have given advantages of closed lateral internal sphincterotomy under local anaesthesia, since results obtained for healing and postoperative complications are similar to those obtained with other type of anaesthesia. This technique has the advantage of not requiring indoor admission. The lower morbidity associated with local anaesthesia in comparison to general or spinal anaesthesia gives higher level of satisfaction and comfort.[11] The portion of the internal sphincter divided tends to be smaller, due to blind division of the internal sphincter and less relaxation of the perineum in comparison to general or spinal anaesthesia which has the advantage of less incidence of incontinence.[12] Incontinence to faeces or flatus is present in none of the patients in this study. Recurrence rate is very less although recurrence depends on other factors also.[13] The results of this study are comparable to other studies with a healing rate of 100% with occasional incontinence.[14]

**Conclusion:**

This study concludes that closed lateral internal sphincterotomy is a less painful technique under local anaesthesia hence good for day care surgery. Closed lateral internal sphincterotomy as day surgery procedure for anal fissure is the surgery of choice. The post operative complications are less and healing rate is high. The closed lateral internal sphincterotomy under local anaesthesia as day surgery procedure is well acceptable to patients.

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