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Fistula in ano: open method compared to lift method ligation of intersphincteric fistula track

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ABSTRACT

Background: To compare fistula in ano open method with lift method ligation of intersphincteric fistula track. **Methods:** This is a prospective study which consisted of 70 patients suffering from fistula-in-ano who were admitted to surgery department. All patients above 18 years of age, cases of transsphincteric low anal fistula, maturation of tract were included in the study.

Results: In this study, 60 patients were included totally, of which, 10 patients were excluded as 5 patients had tuberculosis, 2 had Crohn's disease and 3 were excluded as they lost follow up. Hence, 50 patients were included in the study. 40 were males and 10 were females with a male to female ratio of 4:1 in this study. The average age of fistula in ano was 45.34 ± 10.39 years. The incidence of fistula in ano was maximum in the age group of 46-55 years. The minimum incidence was in the age < 30 years. The most common primary fistula is intersphincteric track (46%), followed by transsphincteric track (42%). The most common type of fistula in ano patients was discharge from the tract which was in all patients, in others, perianal pain and bleeding was observed. Fistula in ano can be divided into low and high level of fistula. High level of fistula-in-ano was found in 64 % of patients and low level of fistula-in-ano was found in 36% of patients. Recurrence was seen in 6 patients with high suprasphincteric track who were ligated below the internal opening and 10 patients had a recurrence with transsphincteric track of which 6 were obese which made identifying the fistula track difficult.

Conclusions: The LIFT procedure is advantageous as no chance of incontinence prevails as the infective focus is removed without dividing any part of sphincter complex, other advantages are that it is easy to learn, perform, safe, high healing rate, low morbidity and easily treat fistula in ano at primary health care level.

Keywords: Cutting seton, Fistula endorectal

INTRODUCTION

Fistula in Ano is characterized by purulent discharge chronically or pain which is cyclical and is a phase of anorectal infection which is associated with the abscess reaccumulating followed by spontaneous decompression intermittently. ^{1,2} It is a connection which is abnormally between the epithelial surface of anal canal and the perianal skin. Due to fecal particles entering internal

opening causing infection and the intersphincteric tract is compressed between the internal and external sphincter causing a closed septic focus, it doesn't heal spontaneously.³ Cutting seton, seton stitch, fibrin glue injection, fistula plug, endorectal advancement flap, vaaft, lay open of fistula in ano etc. are the surgical techniques used. LIFT (Ligation of intersphincteric fistula track) is an advanced technique which was developed by Thai surgeon Arun Rojanasakul for saving

the anal sphincter during fistulectomy.⁴ In this procedure, the removal of infected cryptoglandular tissue through the intersphincteric approach and closure of the internal opening securely is done. This technique is minimally invasive, simple and safe, effective, with a high and rapid healing rate without any incontinence. This results in anal function remaining intact postoperatively, doesn't divide the anal sphincters and faster healing.⁵

METHODS

This is a prospective study which consisted of 70 patients suffering from fistula-in-ano between November 2013 to October 2015 who were admitted to Surgery department of Gandhi Medical College, Hyderabad.

Inclusion criteria

All patients above 18 years of age, cases of transsphincteric low anal fistula, maturation of tract.

Exclusion criteria

Patients with abscess of anorectum, complexity in fistula in ano, incontinence preoperatively, lost follow up, inflammatory bowel disease, tuberculosis.

The procedure was in accordance to the standards of ethical committee. The night before surgery, the preoperative rectal enema was carried out. All the patients were operated by LIFT technique. Under spinal anesthesia, the procedures were performed in lithotomy position. The procedure was as follows; by injection of methylene blue and hydrogen peroxide through the external opening and gently probing the fistula tract, the location of the internal opening was identified. Via the curvilinear incision, the intersphincteric plane at the site of the fistulous tract was entered.

Using scissors and electrical cautery, the intersphincteric tract was identified by meticulous dissection. Using especially designed long and narrow blade retractors, the exposure of the intersphincteric plane was facilitated. Using a small right-angled clamp, intersphincteric tract was hooked. Close to the internal sphincter with polyglactin-910 size 2/0, tract was then ligated. The tract was divided distal to the point of ligation. Possibly the infected gland or the remnant of the intersphincteric tract was removed. The fistulous tract would then be curetted thoroughly.

The external opening was left open for drainage. No restriction of diet was required after the operation. The patients were recommended to clean their wounds with tap water and betadine solution. All the patients were treated with postoperative intravenous antibiotics for 6 days, sitz bath from the first postoperative day, an analgesic for pain relief and stool bulking agents were given. Follow up was taken of all the patients for a period of 18 weeks and were assessed for incontinence.

RESULTS

In this study, 60 patients were included totally, of which, 10 patients were excluded as 5 patients had tuberculosis, 2 had Crohn's disease and 3 were excluded as they lost follow up. Hence, 50 patients were included in the study. 40 were males and 10 were females with a male to female ratio of 4:1 in this study.

Table 1: Age distribution.

Age in years	Number of patients	Percentage
<30	4	8
31-45	11	22
46-55	23	46
56-65	7	18
>66	5	6
Total	50	100

Table 2: Distribution of primary fistula tracks among patients.

Primary track	Number of patients	Percentage
Transsphincteric	21	42
Intersphincteric	23	46
Suprasphincteric	6	12
Total	50	100

Average age of fistula in ano was 45.34 ± 10.39 years. The incidence of fistula in ano was maximum in the age group of 46-55 years. The minimum incidence was in the age < 30 years.

Table 3: Distribution of symptoms among patients.

Symptoms	Number of patients	Percentage
Discharge	50	100
Perianal pain	5	
Bleeding	5	

Table 4: Type of fistula as per anatomic level.

Type of fistula	Number of patients	Percentage
Low	18	36
High	32	64
Total	50	100

Most common primary fistula is intersphincteric track (46%), followed by trans-sphincteric track (42%).

Most common type of fistula in ano patients was discharge from the tract which was in all patients, in others, perianal pain and bleeding was observed.

High level of fistula-in-ano was found in 64 % of patients and low level of fistula-in-ano was found in 36% of patients. Recurrence was seen in 6 patients with high

suprasphincteric track who were ligated below the internal opening and 10 patients had a recurrence with transsphincteric track of which 6 were obese which made identifying the fistula track difficult.

DISCUSSION

In present study most, common primary fistula is intersphincteric track (46%) followed by transsphincteric track (42%). Symptom most observed is discharge from the tract which was in all patients, in others, perianal pain and bleeding was observed. As per anatomic level type of fistula is seen more is high level of fistula-in-ano 64 % of patients and low level of fistula-in-ano was found in 36% of patients. Recurrence was seen in 6 patients with high suprasphincteric track who were ligated below the internal opening and 10 patients had a recurrence with trans-sphincteric track of which 6 were obese which made identifying the fistula track difficult. This recurrence might be due to infection which causes nonhealing of internal openings wound as it caused breakdown of the closure wound of the internal sphincter or due to technical error in identifying the fistula track or may be due to small size of fistula track or deeply seated fistula track.

Many other studies have been reported regarding ligation of intersphincteric track. Khadia M et al: conducted a prospective study which aimed to LIFT in the management of patients of fistula-in-ano cryptoglandular origin in 52 patients managed with LIFT technique and results of LIFT technique were compared with other studies in terms of recurrence rate, incontinence rate, and other postoperative complications.⁶ A total of 52 patients were studied. Median follow-up was 24 weeks. Primary healing was achieved in 32 (71.11%) patients. Thirteen patients (28.88%) had a recurrence. No patient reported any subjective decrease incontinence after the procedure. LIFT technique is simple and easy to learn. With this method fistula-in-ano could be easily treated even at primary health care level. LIFT technique is a simple and novel modified approach for the treatment of fistula-in-ano with rapid healing rate and without any resultant incontinence.

Anaraki F et al; conducted a study in which Ligation of intersphincteric fistula tract technique is a new sphincter saving method with good results in management of anal fistula, but few studies report long-term follow-up data. This study investigated the use of ligation of intersphincteric fistula tract as a sphincter saving method based on long term results. The study was conducted at two tertiary care university medical centers. 36 patients with complex Primary healing rate, failures and fecal incontinence score of patients were followed for 6-48 months. The mean age of the patients was 35 years and 50% had two previous attempts at surgery. A total of 25 patients (69/5%) had high transsphincteric fistula. Successful fistula closure was achieved in 63/8% of the patients (23 of 36) Only one (2/77%) patient reported gas

incontinence (score: 3) after the procedure. The recurrence rate and fecal incontinence were measured. The ligation of inter- sphincteric fistula is a promising sphincter-preserving procedure that is simple and

Hassan E. A. Younes et al; conducted a study in which management of anal fistula is a challenging issue in surgical practice.8 No single technique is appropriate for treatment of all types of fistulas. The aim of this study was to evaluate the efficacy and safety of a new sphincter-sparing technique: ligation intersphincteric fistula tract (LIFT) for management of anal fistula. Fistula healing rate was (90.5%); recurrence rate was 9.5% in the form of down staging to intersphincteric fistulas. Mean time of healing of intersphincteric wound was 32±7.4 days (ranged from 17 to 58 days). Mean time of healing of the external opening wound was 27±5.8 days (ranged from 19 to 56 days). No postoperative changes in fecal continence. LIFT operation is a safe and effective management of transsphincteric anal fistula, this technique has high healing rate with no effect on fecal continence.

Sergio Danilo Tomiyoshi T et al conducted a study in which the abscesses and anal fistulas represent about 70% of perianal suppuration, with an estimated incidence of 1/10000 inhabitants per year and representing 5% of queries in coloproctology.9 It aimed to evaluate the effectiveness of the interesphincteric ligation technique of the fistulous tract in the treatment of anal fistula. The records of eight patients who underwent this technique, evaluating age, gender and presence of incontinence were studied. Was named technical first-step the passage of cotton thread to promote the correct individualization of the fistula and, as the second, the surgical procedure. Two patients were men and eight women. The mean age was 42.8 years. Of these, seven (87.5%) had complete healing of the fistula; six were cured only with this procedure and required additional operation with simple fistulotomy. Only one patient developed incontinence which was documented by anorectal manometry. There were no deaths in this series. The interesphincteric ligation technique of the fistulous tract proved to be effective for the treatment of anal fistula and should not be discouraged despite the occurrence of eventual fecal incontinence.

Cetinkaya E et al; conducted a study in which it aimed to assess the results of LIFT technique for the patients with complex anal fistula in our colorectal unit. This study enrolled 24 patients with a mean age of 40.5 (range 16-69) years, ten of the patients had recurrent fistulas and 14 were newly diagnosed. Successful fistula repair was achieved in the 87.5% of the patients, 3 patients had failure at the follow-up. No incontinence was observed in any of the patients. Ligation of the intersphincteric tract is a novel sphincter-preserving method for complex anal fistulas and it is a simple, safe, cost-effective procedure with high success rates it could be candidate for being the gold standard method for complex anal fistulas.

CONCLUSION

The LIFT procedure is advantageous as no chance of incontinence prevails as the infective focus is removed without dividing any part of sphincter complex, other advantages are that it is easy to learn, perform, safe, high healing rate, low morbidity and easily treat fistula in ano at primary health care level.

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institutional ethics committee

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