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A PROSPECTIVE STUDY ON EFFECTIVENESS OF LIGATION OF INTERSPHINCTERIC FISTULA TRACT (LIFT) IN ANAL FISTULAS

General Surgery

M.Sabrena*	Assistant professor, Dept of General Surgery, GOVT. Chengalpattu medical college, Chengalpattu – *Corresponding Author
G.Varaguna Pandian	Assistant professor, Dept of General Surgery, GOVT. Chengalpattu medical college, Chengalpattu.
G.V.Bharadwaj	Assistant professor, Dept of General Surgery, GOVT. Chengalpattu medical college, Chengalpattu.
V.Swathika	Post Graduate, Dept of General Surgery, GOVT .Chengalpattu medical college, Chengalpattu.
S. Sudhishnaa	Post Graduate, Dept of General surgery, GOVT .Chengalpattu medical college, Chengalpattu.
A. Divya Kalyani	Post Graduate, Dept of General surgery, GOVT. Chengalpattu medical college, Chengalpattu.

ABSTRACT

The study was conducted on 164 patients who underwent LIFT in the Fourth unit of Department of General Surgery, Chengalpattu Medical College Hospital from Jan 2019 to Dec 2019. The aim of the study was to evaluate effectiveness of ligation of intersphincteric fistula tract (lift) in anal fistulas". The study was conducted by performing LIFT among 164 patients after satisfying the inclusion and exclusion criteria.
In this study, Fistula in ano was more common among the male population with mean age group being the third and the fourth decade. Post-operatively, there was minimal significant development in wound infection. As a consequence, the stay in the hospital was reduced and so the overall expenditure for patients is decreased. To summarize, the ligation of the intersphincteric fistula tract technique for fistula in ano appears to be effective, safe and easy to perform with encouraging early outcomes.

KEYWORDS

fistula in ano, intersphincteric ligation, LIFT surgery

INTRODUCTION:

Fistula in ano is a chronic abnormal communication usually lined to some degree by granulation tissues. It extends from the anorectal lumen to the skin of the perineum. Fistula in ano is one of the common surgical problems encountered these days with a prevalence of 8.6 to 10/100,000 of the populations per year and male: female ratio of 1.8:1. Perianal fistulas most commonly occur following episodes of anorectal sepsis. They are classified based on the relation of the fistulous tract to the sphincter into four distinct groups by Park namely: intersphincteric, transsphincteric, suprasphincteric and extrasphincteric.

The surgical treatment of anal fistulas has been a challenge for both the surgeons and patients. There are variable surgical procedures for the management of anal fistula with variable risk of incontinence and recurrence which includes fistulotomy, seton placement, endorectal advancement flap, ano cutaneous advancement flap, excision and closure of the internal opening, insertion of fibrin or cyano acrylate glue, insertion of fistula plug, video assisted anal fistula treatment and ligation of the inter sphincteric fistula tract (LIFT).

Out of these techniques the ligation of intersphincteric fistula tract (LIFT) is the most promising surgical technique which is based on secure closure of the internal opening and removal of the infected crypto glandular tissue through inter sphincteric approach. This procedure was simple, safe and minimally invasive. It was effective with high and rapid healing rate without any resultant incontinence. It is now being adopted because of early satisfactory results. The aim of the study was to evaluate the efficiency of LIFT technique for fistula in ano in our setup.

The objective of this study is to evaluate the effectiveness of LIFT surgery in anal fistulas in Govt Chengalpattu medical college and hospital.

The parameters taken into consideration in evaluating the outcome of the study are rate of wound healing, occurrence of infection, mean hospital stay, sphincter incontinence and recurrence.

MATERIALS AND METHODS:

The prospective study was conducted between January 2019 and December 2019. It includes 164 patients who were operated (Ligation of inter sphincteric fistula tract) for fistula in ano in all units, Department of Surgery, Govt Chengalpattu Medical College and Hospital, over a period of about one year. We included patients giving informed consent to the procedure, aged >18 years of both gender, without any comorbidity and those not associated with inflammatory bowel disease, TB, malignancy.

The study was conducted on the basis of all the patients admitted in the ward as elective cases from outpatient department operated for fistula by LIFT procedure are included in the study, namely **164** study participants. The diagnosis of fistula in ano was made by the detailed medical history and digital rectal examination. Continence was assessed by patient's ability to hold the solid stool, liquid stool and flatus and by the assessment of anal sphincter tone during digital rectal examination. No anal manometry was performed.

PROCEDURE OF LIFT:

Most of the fistula tracts can be identified by palpating an internal opening by rectal examination or by injection of saline through the external opening. Inter sphincteric plane was entered via curvilinear diathermy incision corresponding to the site of the internal opening at inter sphincteric groove which had the characteristics of a cord like structure identified by palpation. Dissect around the tract using a narrow and small angle clamp. Confirm the tract either by injecting saline or passing a probe through the external opening. Secure suture ligation or trans fixing of inter sphincteric fistula tract at both sides using 3-0 absorbable suture near to the internal opening (closer to internal sphincter) and another suture at the external sphincter defect. Remove the fistula tract by excising in between the ligation. Make sure that tract is sutured well by injecting saline and as well as by inserting a probe at both openings (internal and external opening).Curette well the fistula tract from external opening. Closure of inter sphincteric wound with absorbable 3-0 simple interrupted single layer. The fistula tract was sent for histopathological examination.

Post operatively, all the patients were put on intravenous broad-spectrum antibiotics and analgesics continued till admitted. The patients were discharged the day after the operation with analgesics,

laxatives and oral Ciprofloxacin and Metronidazole for one week. Before being discharged the patients were shown how to clean their wound and were advised to take sitz bath 2-3 times a day for 15 minutes each time and restrict physical and sexual activities. After hospital discharge the patients were seen one week after the initial procedure. At the first visit they were prescribed oral cephalexin for 5 days.

The second consultation was 4 weeks after the first visit and the follow up was thereafter until complete wound healing had occurred (follow-up up to 3 months). At each visit the patients were interviewed for clinical continence status. The intersphincteric incision wound was examined, the site of the previous internal and external opening was palpated and sphincteric tone was assessed. After healing the patient was asked to return to the work. The time to return to the work after surgery was noted. All patients with documented healed fistula were enquired of possible recurrence.

All patients underwent the following post-operative assessments – mean hospital stay, wound healing, post operative wound infection, post operative complications namely recurrence and incontinence.

OBSERVATIONS:

Distribution of Sex:

A total of 164 patients who presented with fistula in ano and underwent ligation of inter sphincteric fistula tract (LIFT) were studied. The patients consisted of 120 males (73.2%) and 44 females (26.8%). The frequency of fistula in ano is much greater in males as compared to females.

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	F	44	26.8	26.8	26.8
	M	120	73.2	73.2	100.0
	Total	164	100.0	100.0	

Distribution by Age:

The ages of the patients ranged from 21 to 66 years. The younger patient in this study was 21-year-old and the oldest was 66 years old with fistula in ano.

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	20-30	22	13.4	13.4	13.4
	30-40	65	39.6	39.6	53.0
	40-50	52	31.7	31.7	84.8
	>50	25	15.2	15.2	100.0
	Total	164	100.0	100.0	

The peak incidence was in the third and fourth decade of life.

Mode of presentation:

In this study, the discharging wound was presenting complaint in 81.25% of the patients. Past history of perianal abscess obtained from 85.97% of the cases and 71.95% of patients had pain around the anal region. From these facts we note that the discharging wound and past history of perianal abscess are the most common mode of presentation.

Mode of presentation	No. Of cases	Percentage
Perinatal discharge	132	81.25%
Perianal irritation	101	62.5%
Pain	118	71.95%
Swelling	12	7.31%
Past history of perianal Abscess	141	85.97%

Number of external openings:

The time from the period of onset of complains with perianal fistula to diagnose ranged from 03 to 24 months with mean of 11 months. In this study of 164 cases, 87.5% of them had only one external opening while 18.75% patients had two openings and another 6.25% had more than two openings. Hence fistula in ano with a single external opening is the commonest occurrence.

Number of external openings	No. Of cases	Percentage
01	143	87.27%
02	18	10.9%
>2	3	1.83%

Location of external opening:

In this study, 83.2% of the patients had posterior opening and 17.8% of the patients had anterior opening. So posterior external opening was more common.

Situation of external opening	No. Of cases	Percentage
Anterior	28	17.8%
Posterior	136	83.2%

Type of fistula:

Out of the 164 cases 70.7% was found to be intersphincteric fistula in ano, which is the most common type of fistula, followed by transphincteric fistula which was present in 28% of patients. Supra sphincter was present in 1.2% of patients.

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	IS	116	70.7	70.7	70.7
	SS	2	1.2	1.2	72.0
	TS	46	28.0	28.0	100.0
	Total	164	100.0	100.0	

Occurrence of post operative wound infection:

1 week

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	INFECTED	12	7.3	7.3	7.3
	NIL	152	92.7	92.7	100.0
	Total	164	100.0	100.0	

4 weeks

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	NIL	164	100.0	100.0	100.0

During the study, one week postoperatively 7.3% of patients developed post op wound infection at the sutured wound. While the 92.7% recovered with no post operative wound infection. At 4 weeks follow up the infected wound also healed by secondary intention and was healthy.

Wound healing:

The mean duration of wound healing was noted to be 2.92 ±1.26 weeks.

Recurrence and Incontinence:

At 3 months post operative period, there were recurrence of fistula in ano 4.3% of patients.

There was no incidence of incontinence in the study group. This further proves that the Ligation of intersphincteric fistula tract procedure is a sphincter preserving surgery.

3 weeks:

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	NIL	157	95.7	95.7	95.7
	RECURRENCE	7	4.3	4.3	100.0
	Total	164	100.0	100.0	

Duration of Post-Operative Stay in Hospital:

In this study it was noted that the mean hospital stay among those operated by Ligation of intersphincteric fistula tract with 2.80 days +/- 1.33.

DISCUSSION:

Fistula in ano is one of the common surgical conditions faced since ancient times. The surgical treatment of fistula in ano should aim at the complete elimination of the fistula while maintaining the sphincter muscle function as much as possible. The criteria determining success or failure of surgery are incidence of recurrence or incontinence. In present study 164 patients were treated for fistula in ano by LIFT procedure. The commonest age group of presentation was third and fourth decade of life.

Most of the patients in our study that is 120 patients (73.2%) were male and these results show that male approximately 9-10 folds at high risk of developing fistula in ano as compared to females. This proves that males have more intra muscular glands than females and they are more ramifying and cystic.

Most common symptom was perianal discharge (82.25%) followed by perianal irritation (61.5%). Pain and swelling were other presentations in some patients. The mean duration of symptoms before surgery was 11 months. In this study majority of the cases the fistulas were found posteriorly (81.25%). In this study our experience showed that LIFT technique can be preferred treatment option for fistula in ano with preventing the recurrence and preserving the incontinence. The surgical treatment of anal fistula aims to eradicate septic focus and fistula tract while preserving anal sphincter function, preventing recurrence, providing comfort and allowing patient to return to normal daily activities as early as they can.

In present study, all patients underwent ligation of intersphincteric fistula tract (LIFT) procedure for fistula in ano and achieved 95.7% cure rate with only 07 (4.3%) cases of recurrence. No anal incontinence was noted in our study.

The results of our study obtained in this study demonstrates that LIFT is a very safe and effective technique. Considering that one of the main expected advantages of the technique is low or zero possibility of an impaired sphincter function (since there is no section of the sphincter), this result was quite surprising. The limitation of this study was its short follow up period.

Huda e Ashok[27] reviewed the initial publication in order to establish more rigid inclusion criteria to identify patients who would benefit from the operation for fistula repair by LIFT technique and achieved 100% success in fistula closure after the first procedure and no patient had loss of continence.

Sileri et al[31], in a prospective study of 18 patients achieved a cure rate of 83% with only three recurrences - the complementary treatment was fistulotomy in one patient and two other endorectal advancement - with subsequent complete healing of the fistula. There were also no cases of incontinence in this study.

Makhlouf and Korany[32.] in a series of 30 patients (25 men), mean age of 36.5 years who underwent LIFT showed complete cure rate of 90%; one patient with abscess six months after the initial procedure and three with recurrence. There were no cases of incontinence.

It is clear that LIFT has results that prove its effectiveness. The articles cited are consistent with this publication regarding the positive outcome of the technique, which stimulates to use LIFT when needed. Perhaps the key to that cure rates reach 100% in the first intervention, is the strict selection of patients in whom the characteristics of the fistulas are favorable to the use of this technique.

Due to the benefits mentioned, the LIFT technique has assumed a good surgical space and should remain with considerable one in relation to the various treatment options for anal fistula. It is expected that further publications with larger sample size to confirm the effectiveness of LIFT encouraging, more and more surgeons to use this technique

CONCLUSION

The ligation of the intersphincteric fistula tract technique for fistula in ano appears to be effective, safe and easy to perform with encouraging early outcomes. LIFT technique is totally anal sphincter saving technique with no risk of post-operative incontinence; the technique is patient friendly with regard to post operative management, pain and discomfort. Wound management is easy as compared to lay open techniques and has a minimum morbidity with less recurrence rate and less post operative infection. However outcome of this technique depends to a great extent on the surgeons experience and patient selection.

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