

## COMPARISON OF VIDEO ASSISTED ANAL FISTULA TREATMENT (VAAFT) VERSUS FISTULECTOMY IN THE MANAGEMENT OF ANORECTAL FISTULA IN TELANGANA POPULATION

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### Abstract

**Background:** Fistula in ano is a common perianal disease that is secondary to infections. There are many surgical techniques used for treatment, like transanal advancement flap repairs (TAFRS), ligation of the intersphincteric fistula tract (LIFT), and surgical fistulectomy, but recurrence and faecal incontinence are a great challenge to surgeons, hence the new technique of VAAFT is attempted. **Materials and Methods:** Out of 50 patients with anal fistulas, 25 were treated surgically (fistulectomy) and 25 were treated with VAAFT. The VAS score was used to measure pain. All patients were observed for one year for any recurrence of disease. Results were statistically analysed. **Result:** There were significant results in the clinical manifestation between fistulectomy and VAAFT patients; p value was highly significant ( $p < 0.001$ ). **Conclusion:** In the present pragmatic study, VAAFT procedure patients had significantly less recurrence and were highly satisfied. It is a safe and effective alternative to conventional fistulectomy.

## INTRODUCTION

An epithelised connection between the rectum or anal canal and the perineum region is called an anal fistula and is of infectious origin. When tract crosses between 30 and 50% of the external sphincter (high trans-sphincteric, supra-sphincteric, and extra-sphincteric fistulas). It has recurrence and has multiple tracts, or the patient has pre-existing incontinence, local irradiation, or Crohn's disease. It is referred to as complex anal fistula (CAF).<sup>[1,2]</sup> It has a high risk of recurrence and postoperative faecal incontinence.<sup>[3]</sup>

There are three fundamental principles that underlie the majority of current treatments for complex anal fistulas: accurate identification of the fistula tracts and internal opening, total eradication of the tracts, and maintenance of anal sphincter function.<sup>[4]</sup> Video-assisted anal fistula treatment, invented by Meinero in 2006, is a cutting-edge minimally invasive method for treating difficult anal fistulas. The direct view of the fistula tract and internal opening is the key characteristic features of the technique. However, clinical usage of VAAFT is a relatively new technique globally, and reported success rates ranged from 66.7 to 87.5%.<sup>[5]</sup> Hence, an attempt was made to evaluate the VAAFT technique and compare it

with the surgical fistulectomy method, and the merits and demerits of both studies were noted.

## MATERIALS AND METHODS

50 (fifty) patients aged between 30 to 55 years visited the general surgery department of Malla Reddy Narayana Multispeciality Hospital, Suraram X Road, Jeedimetla Qutbullapur (Mandal), Hyderabad, Telangana-500055 were studied.

### Inclusion Criteria

The patients had a presentation of fistula in ano and gave written consent for treatments that were included in the study.

### Exclusion Criteria

The patients with recurrent fistulae, with diseases like Crohn's tuberculosis and anorectal malignancies that present multiple perianal fistulous openings. Patients with immune-compromised diseases were excluded from the study.

### Method

Patients are divided into two groups A&B with 25 in each group. Group A were operated with Fistulectomy and group B patients underwent VAAFT. An anal fistula was termed complex anal fistula (CAF) when the tract crossed more than 30–50% of the external sphincter (high trans, supra, or extra-sphincter fistula). All the patients were

evaluated to determine the fistula tracts and primary openings, including digital rectal examination, pelvic ultrasonography, and MRI (if necessary). A colonoscopy was also performed to exclude cases of inflammatory bowel disease. The VAAFT procedure is as follows.

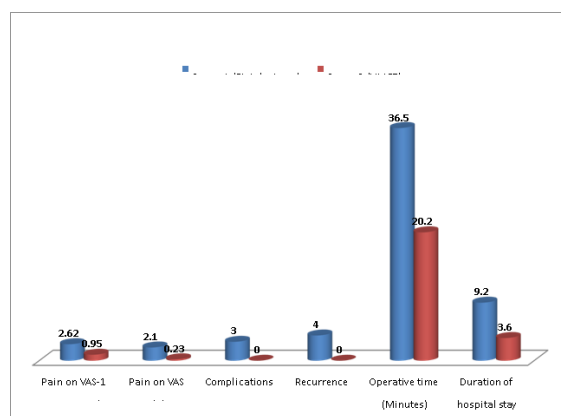
1. Three doses of ceftriaxone 1 gm IV was given every 12 hours, beginning 30 minutes before surgery, as an antibiotic prophylactic.
2. Anaesthesia-induced and examination done to identify the exterior entrance of the fistula
3. Electrostimulation to validate the alleged trans-sphincteric or supra-sphincteric course of the fistula
4. High-pressure saline irrigation of the fistula to achieve enlargement of the internal lumen of the fistula
5. Fistuloscopy using a standard 3.3 mm coaxial operative cystoscope to view the course of the fistula and spot any side tracts that extend up to the internal anal or rectal entrance
6. Determining whether the endorectal or anal opening exists
7. After visualisation of the whole tract and electrocautrisation done for all branches, monopolar type is used for all sites carefully and step by step to avoid missing any lesion.
8. Mucosal sleeve closure of the rectal or anal opening of the fistula A group was treated surgically, i.e., Fistulectomy.

**Statistical analysis:** VAS analogues of pain, complications, recurrence, operation time (minutes), stays in hospital, and patient satisfaction were compared with a t test. The statistical analysis was carried out in SPSS software. The ratio of males and females was 2:1.

## RESULTS

[Table 1] Comparison of clinical manifestations of VAAFT vs. fistulectomy

- Pain on VAS 1 day – 3.62 ( $\pm$  1.3) in group A, 0.95 ( $\pm$  0.2) in group B; t test was 1.01 and  $p < 0.001$ .
- Pain on VAS 2nd day – 2.10 ( $\pm$  1.2) group A, 0.23 ( $\pm$  0.1) group B; t test was 7.7 and  $p < 0.001$ .
- type of Fistula (low/high/anorectal): 16/8/1 in group A, 17/7/2 in group B, and  $p < 0.005$
- complications – 3 cases in group-A and zero in group B; the t test was 1.8 and  $p < 0.001$
- Recurrence 4 in group A and zero in group B, t test was 2.18 and  $p < 0.001$
- Operative time (minutes): 36.5 ( $\pm$  2.5) in group A, 20.2 ( $\pm$  1.8) in group B; t test: 26.4 and  $p < 0.001$ .
- Duration of hospital stay (in days): 9.2 ( $\pm$  1.6) in group A, 3.6 ( $\pm$  0.7) in group B; t test was 16.03 and  $p < 0.001$ .
- Patients satisfaction (a) Good – 13 in group A, 22 in group B; t test was 3.02 and  $p < 0.001$
- (b) Not satisfied – 12 group A, 3 group B, t test was 3.02 and  $p < 0.005$



**Figure 1: Comparison of clinical manifestations in VAAFT and Fistulectomy**

**Table 1: Comparison of clinical manifestations in VAAFT and Fistulectomy**

Clinical Manifestation	Group A (Fistulectomy)	Group B (VAAFT)	t test	p value
Pain on VAS-1 post op 1 <sup>st</sup> day	3.62 ( $\pm$ 1.3)	0.95 ( $\pm$ 0.2)	1.01	$P < 0.001$
Pain on VAS 2 <sup>nd</sup> day	2.10 ( $\pm$ 1.2)	0.23 ( $\pm$ 0.1)	7.7	$P < 0.001$
Type of Fistula	16/8/1	17/7/1	--	$P < 0.005$
Low				
High				
Ano-rectal				
Complications	3 case	0	1.8	$P < 0.001$
Recurrence	4	0	2.18	$P < 0.001$
Operative time (Minutes)	36.5 ( $\pm$ 2.5)	20.2 ( $\pm$ 1.8)	26.4	$P < 0.001$
Duration of hospital stay (in days)	9.2 ( $\pm$ 1.6)	3.6 ( $\pm$ 0.7)	16.03	$P < 0.001$

## DISCUSSION

Present study is a comparative study of VAAFT versus Fistulectomy in Telangana population. The comparison of clinical manifestations VAAFT vs. Fistulectomy pain on VAS post-operation 1st day: 3.62 ( $\pm$  1.3) in Fistulectomy, 0.95 ( $\pm$  0.2) in VAAFT group; t test was 1.01 and  $p < 0.001$ . Pain on VAS 2nd day: 2.10 ( $\pm$  1.2) in Fistulectomy (group-A), 0.23 ( $\pm$  0.1) in VAAFT group; t test was 7.7 and  $p < 0.001$ .

Type of fistula: low/high/anorectal: 16/8/1 in the Fistulectomy group, 17/7/1 in the VAAFT group, and  $p > 0.005$ . Complications in 3 cases of Fistulectomy and zero in VAAFT, the t test was 1.8 and  $p < 0.001$ . Recurrences were 4 in the Fistulectomy group and zero in VAAFT; the t test was 2.18 and  $p < 0.001$ . Operation time (minutes): 36.5 ( $\pm$  2.5) in the Fistulectomy group, 20.2 ( $\pm$  1.8) in the VAAFT group; t test: 26.4 and  $p < 0.001$ . Duration of stay in hospital (in days): 9.2 ( $\pm$  1.6) in the

Fistulectomy group, 3.6 ( $\pm$  0.7) in the VAAFT group; t test: 16.3 and  $p < 0.001$ . Patients satisfaction Good 13 in Fistulectomy, 22 in VAAFT, t test was 3.02 and  $p < 0.001$ . Not satisfied 12 in fistulectomy, 3 in VAAFT, t test was 3.02 and  $p < 0.005$ . These findings are more or less in agreement with previous studies.<sup>[6-8]</sup>

There are numerous sphincter-saving strategies for the preservation of anal sphincter function. Fistula plugs, fibrin glue trans-anal advancement flap repairs (TAFRS), and ligation of the inter-sphincteric fistula tract (LIFT) are currently the most common procedures. However, their healing rates vary widely, from 14 to 81.4%.<sup>[9]</sup> Complex anal fistula (CAF) is the most difficult clinical issue in anorectal surgery, despite several attempts to repair it over the years.

Simple and most distal fistulas can be successfully treated with traditional surgical procedures such as the lay-open operation and Fistulectomy with a success rate of 100%, but there is a high risk of recurrence and damage to the anal sphincter function, which remain serious problems.<sup>[10]</sup> Draining setons can reduce harm to the ability of anal sphincter function. However, the rates of fistula recurrence range from 19.5 to 47%.<sup>[11]</sup>

The VAAFT is popular because of its accurate identification of fistula tracts and internal opening, total eradication of the tract due to fistuloscopy, illumination, and surveillance, and hence the function of the anal sphincter. Hence, the success rate ranges from 66.7 to 87.5%.<sup>[12]</sup>

## CONCLUSION

Video Assisted Anal fistula treatment is a new sphincter sparing procedure to treat fistulas in ano. It

is associated with low morbidity and has a reasonable success rate of 76%. Therefore, additional research is required to determine both its effectiveness and indication.

**Limitation of Study:** Owing to the tertiary location of the research centre, the small number of patients, and the lack of the latest techniques, we have limited findings and results.

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