

## COMPARISON OF VAAFT FISTULECTOMY IN THE MANAGEMENT OF ANORECTAL FISTULA IN NORTH KARNATAKA POPULATION

Harshagouda Naganagoudar<sup>1</sup>, Jayaprabhu Uttur<sup>2</sup>, Praveen kumar K H<sup>3</sup>  
Sanjay Namadar<sup>4</sup>

Received : 09/01/2024  
Received in revised form : 20/03/2024  
Accepted : 06/04/2024

**Keywords:**

*fistula-in ano, fistuloscopy, fistulectomy, complex anal fissure (CAF), anal sphincter.*

Corresponding Author:  
**Dr. Sanjay Namadar,**  
Email:

DOI: 10.47009/jamp.2024.6.2.127

Source of Support: Nil,  
Conflict of Interest: None declared

*Int J Acad Med Pharm*  
2024; 6 (2); 603-605



<sup>1</sup>Assistant professor, Department of General Surgery, KLE's Jagadguru Gangadhara Mahaswamigalu Moorusavirmath Medical College Hubli, India.

<sup>2</sup>Associate Professor, Department of General Surgery KLE's Jagadguru Gangadhara Mahaswamigalu Moorusavirmath Medical College, Hubli, India.

<sup>3</sup>Assistant professor, Department of General Surgery, KLE's Jagadguru Gangadhara Mahaswamigalu Moorusavirmath Medical College, Hubli, India.

<sup>4</sup>Professor, Department of General Surgery, Dr. Patnam Mahender Reddy Medical College Chavella, Telangana, India.

### Abstract

**Background:** The fistula in ano is the abnormal communication in perianal region with infected perineal glands. Due to its painful condition before and after surgery. It is a great challenge for a surgeon to carry out a pain-less fistulectomy. **Materials and Methods:** Out of 40 patients with anal fistulas, 20 were treated surgically (fistulectomy), and 20 were treated with VAAFT. The VAS score was used to measure pain. All patients were observed for one year for any recurrence of the disease. The results were statistically analysed. **Results:** In the comparative study of VAAF and fistulectomy, there is a significant p value ( $p < 0.001$ ). **Conclusion:** It is concluded that the VAAFT procedure is safer and painless with least recurrence, and patients were highly satisfied with this technique as they could return early to their day-to-day work as compared to the fistulectomy procedure.

## INTRODUCTION

Fistula-in-ano is one of the most common encounters in surgical clinics dealing with anorectal diseases.<sup>[1]</sup> Fistulae develop when an infected perianal gland forms an abscess and ruptures into the anal canal on one side and the perianal skin on the other side.

There are different types of fistulae with respect to their course through the anal sphincter, subcutaneous intersphincteric, trans-sphincteric, supra-sphincteric, and extra-sphincteric sphincters.<sup>[2]</sup>

As per the Goodsall's rule, fistulae are anterior to the transverse line drawn across. The anal canal in the lithotomy position tends to have a simple and straight course, while those posterior to the said line tend to have a complex curved pathway. Fistula-in-ano is known for its branches. These fistulae, by nature of their chronicity and complexity, will pose a great challenge to surgeons. The conventional fistulectomy procedure, where the entire fistulous tract is laid open, brings a lot of post-operative pain, takes more time to heal, and has high recurrence rates ranging from 15 to 40%. Another important problem is injury to the anal sphincter, resulting in incontinence. Hence, a new method for fistulectomy called VAAFT (video-

assisted anal fistula treatment) has proven safer and more efficacious.

VAAFT can be used for both diagnostic and therapeutic purposes. This procedure does not involve tissue cutting or laying open the tract. It is a minimally invasive procedure where the fistulous tract is probed with a scope and the entire tract visualized until the internal opening. Hence, an attempt is made to compare VAAFT versus fistulectomy in the management of anorectal fistulas.

## MATERIALS AND METHODS

40 (forty) patients aged between 30 to 55 years visited the general surgery department at JGMM Medical College Hubli-580028, Karnataka were studied.

### Inclusive Criteria

The patients who have presentation of fistula in ano and given written consent for treatments were included in the study.

### Exclusion Criteria

Patients with recurrent fistulae and diseases like Crohn's disease, tuberculosis and anorectal malignancies that present with multiple perianal fistulous openings. Patients with immune-

compromised diseases were excluded from the study.

### Method

Patients are divided into two groups. Out of 40 patients with anal fistulas, 20 were treated surgically (fistulectomy), and 20 were treated with 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 consists of

- Three doses of ceftriaxone 1 gm IV were given every 12 hours, beginning 30 minutes before surgery, as an antibiotic prophylactic.
- Anesthesia-induced examination to identify the exterior entrance of the fistula
- Electrostimulation to validate the alleged trans-sphincteric or supra-sphincteric course of the fistula
- High-pressure saline irrigation of the fistula to achieve enlargement of the internal lumen of the fistula

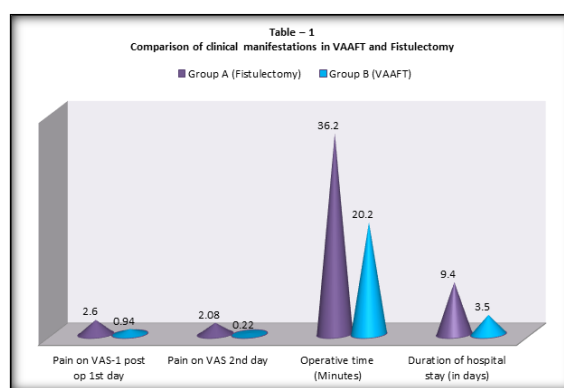
Duration of study: January 2023 to December 2023

### Statistical Analysis

VAS analogues of pain, complications, recurrence, operation time (minutes), stay 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

- Pain on VAS 1st day: 2.60 ( $\pm$  1.2) in group A, 0.94 ( $\pm$  0.2) in group B; t test was 6.10 and  $p < 0.001$ .
- Pain on VAS 2nd day: 2.08 ( $\pm$  1.1) group A, 0.22 ( $\pm$  0.1) group B; t test was 7.5 and  $p < 0.001$ .
- type of fistula: low = 13, high = 6, anorectal = 1 in group A, 14=low, 5=high, 1= anorectal, and  $p < 0.001$ .
- complications: 2 in group A, 00 in group B, and  $p < 0.001$ .
- Recurrence 3 in group A and 00 in group B, and  $p < 0.001$
- Duration of operation in minutes: 36 ( $\pm$  2.4) in group A, 20.2 ( $\pm$  1.6) in group B; t test was 24.8 and  $p < 0.001$ .
- Duration of hospital stay (in days): 9.4 ( $\pm$  1.5) in group A, 3.5 ( $\pm$  0.6) in group B; t test: 16.2 and  $p < 0.001$ .



**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	2.60 ( $\pm$ 1.2)	0.94 ( $\pm$ 0.2)	6.10	$P < 0.001$
Pain on VAS 2 <sup>nd</sup> day	2.08 ( $\pm$ 1.1)	0.22 ( $\pm$ 0.1)	7.53	$P < 0.001$
Type of Fistula				
Low   High   Ano-rectal	13/6/1	14/5/1	--	$P < 0.005$
Complications	2 case	0		$P < 0.001$
Recurrence	3	0		$P < 0.001$
Operative time (Minutes)	36.2 ( $\pm$ 2.4)	20.2 ( $\pm$ 1.6)	24.8	$P < 0.001$
Duration of hospital stay (in days)	9.4 ( $\pm$ 1.5)	3.5 ( $\pm$ 0.6)	16.02	$P < 0.001$

## DISCUSSION

A comparative study of VAAFT fistulectomy in the management of anorectal fistulae in the north Karnataka population was done. Pain on VAS 1st day: 2.60 ( $\pm$  1.2) in group A, 0.94 ( $\pm$  0.2) in group B; t test was 6.10 and  $p < 0.001$ . Pain on VAS 2nd day: 2.08 ( $\pm$  1.1) in group A, 0.22 ( $\pm$  0.1) in group B; t test was 7.53 and  $p < 0.001$ . Type of fistula: 13-low, 6-high, 1-anorectal group A, 14-low, 5-high, 1-

anorectal, and  $p > 0.001$ . Complications of surgery were observed only in group A, and recurrence was also observed only in group A. Operative time (minute): 36.2 ( $\pm$  2.4) in group A, 20.2 ( $\pm$  1.6) in group B; t test: 24.5 and  $p < 0.001$ . The duration of hospital stay (in days): 9.4 ( $\pm$  1.5) in group A, 3.5 ( $\pm$  0.6) in group B, t test: 16.2 and  $p < 0.001$ . These findings are more or less in agreement with previous studies.<sup>[5,6,7]</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 intersphincteric fistula tract (LIFT) are currently the most common procedures. However, their healing rates vary widely, from 14 to 81.4% (9). 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 remains a serious problem.<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, surveillance, and 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 in a large number of patients.

### Limitation of study

Owing to the tertiary location of the research center, the small number of patients, and the lack of the

latest techniques, we have limited findings and results.

- This research work is approved by JGMM Medical College, Hubli 580028, Karnataka.
- There is no conflict of interest.
- Self-funding

## REFERENCES

1. Malik AI, Nelson RL, Surgical management of anal fistula: a systemic review, *Colorectal Dis.* 2008, 10 (5); 420–30.
2. Bubbers EJ, Cologne KG: Management of complex anal fistulas *Clin. colon. Rectal Surg.* 2016, 29 (1); 43–49.
3. Westertep M, Volkers NA, Anal fistulcetomy between the skylla and charybdis *colorectal Dis.* 2003, 5 (6); 549–551.
4. Parls AG, Sitz RW, The treatment of high fistula in ano, *Dis. Colon. Rectum.* 1976, 19(6); 487-99.
5. Walega P, Ramaniszyn M, VAAF: A new minimally invasive method in the diagnosis and treatment of anal distula initial results *Dis. Colon rectum* 2022, 46 (4); 498–502.
6. Whiteford MH, Kilcunny J, Practice parameters for the treatment of perianal abscess and fistula in ano *Springer* 2005, 48 (7); 1337-
7. Garg P, Sing J, and Bhatia: The efficacy of anal fistula plug-in fistula in a systemic review *Colorectal Dis.* 2010, 12 (10); 965–970.
8. Limura E, WJG P, and GWJ of G undefined modern management of fistula ([ncb://www.ncbi.nlm.nih.gov/pmc/articles/PMC4284327/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4284327/)), viewed on November 20, 2022.
9. Keighly MRB, Williams NS, *Surgery of anus rectum and colon*, 3rd edition, London W.B. Saunders Company Ltd., 1993, 392-402.
10. Kron borg O: To lay open or excise in fistula in a randomized trial *Br. J. Surgery* 1985, 72 (12); 970-73.
11. Buchanan G. N., Bortram CI: Efficacy of fibrin sealant in the management of complex anal fistulas, *Dis. Colon Rectum* 2003, 46 (9); 1167–74.
12. Meinero P, Mori L: Video-assisted anal fistula treatment (VAAFT), a novel sphincter-saving procedure for treating complex fistulas, *Tech. Coloproctol.* 2011, 15(4): 417–22.