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## Technical note

**VAAFT - Videoassisted anal fistula treatment: a new approach for anal fistula****Carlos Ramon Silveira Mendes<sup>a,b,\*</sup>, Luciano Santana de Miranda Ferreira<sup>a</sup>, Ricardo Aguiar Sapucaia<sup>c</sup>, Meyline Andrade Lima<sup>a</sup>, Sergio Eduardo Alonso Araujo<sup>c,d</sup>**<sup>a</sup>Service of Coloproctology, Hospital Santa Izabel da Santa Casa de Misericórdia da Bahia, Salvador, BA, Brazil<sup>b</sup>Hospital Geral Roberto Santos, Salvador, BA, Brazil<sup>c</sup>Department of Gastroenterology, Faculdade de Medicina, Universidade de São Paulo (USP), São Paulo, Brazil<sup>d</sup>Service of Colon and Rectum Surgery, Hospital das Clínicas, Faculdade de Medicina, Universidade de São Paulo (USP), São Paulo, Brazil

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## ABSTRACT

**Introduction:** Anal fistula is an epithelised path between the rectum or anal canal and the perianal region. The use of laparoscopic surgery with a minimally invasive procedure has led to the development of video-assisted surgical treatment of anal fistula.

**Objective:** To describe the surgical technique VAAFT as a new approach to fistula.

**Conclusion:** This is a safe and reproducible procedure. It enables the study of the entire fistula, obtaining the identification of accessory paths, cavitations and of the inner hole. More studies should be published for a better analysis of this technique, as well as to have a long-term outcome with new publications.

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Este é um artigo Open Access sob a licença de [CC BY-NC-ND](http://creativecommons.org/licenses/by-nc-nd/4.0/)**VAAFT - Tratamento de fístula anal videoassistida: uma nova abordagem para a fístula anal**

## RESUMO

**Introdução:** A fístula anal é um trajeto epiteliado entre o reto ou canal anal e a região perianal. O uso da videocirurgia com o procedimento minimamente invasivo levou ao desenvolvimento do tratamento cirúrgico vídeo-assistido da fístula anal.

**Objetivo:** Descrever a técnica cirúrgica do VAAFT como uma nova abordagem das fístulas.

**Conclusão:** Trata-se de um procedimento seguro e reprodutível. Possibilita estudo de todo o trajeto fistuloso, conseguindo identificação de trajetos acessórios, cavitações, bem como do orifício interno. Mais estudos devem ser publicados para melhor análise dessa técnica, bem como para termos um resultado a longo prazo com novas publicações.

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## Palavras-chave:

Fístula anal

Procedimento cirúrgico minimamente invasivo

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## Introduction

Anal fistula is an epithelised communication between the rectum or anal canal and the perineal region. In 90% of cases, the origin of the fistula is of cryptoglandular nature, and Crohn's disease, trauma, malignancies, infections and radiotherapy account for the remaining 10%.<sup>1</sup> The incidence of fistula is 8.6 per 100,000 people with predominance in males, 2:1. The clinical manifestation of anal fistula is anal itching associated with discomfort with anal pain and recurrent infections. The diagnosis is usually established by clinical history and physical examination. For a better study, the diagnostic workup may be supplemented with pelvic MRI and/or endorectal ultrasonography.

The treatment is surgical; its objective is to treat the inner hole and remove the fistulous path.

The surgery can be performed in a number of ways by invasive techniques, for instance, fistulotomy and fistulectomy, with great risk of sphincter injury. Less invasive techniques using a plug, fibrin glue, mucosal advancement flap and ligation of intersphincteric fistulous tract (LIFT) have sought to preserve the anal sphincter.<sup>2-6</sup>

The association of video and surgery in the search of a minimally invasive procedure led to the development of video-assisted anal fistulous treatment (VAAFT) by Meinero, which we describe in this manuscript. The VAAFT procedure is performed with the use of a fistuloscope, which allow a search for the correct location of the internal fistula, as well as the study of the fistulous path in search of collections or accessory paths.<sup>7</sup>

The VAAFT technique does not affect the faecal continence and features a recurrence of up to 30%, being quite satisfactory for a minimally invasive technique.

The purpose of this article was to describe the VAAFT technique in the treatment of anal fistula, as well as to report the first Brazilian case.

### Technical description

The **Video-assisted anal fistula treatment** is performed using a fistuloscope (Fig. 1) (Karl Storz, Tuttlingen, Germany). The kit consists of a fistuloscope, a monopole electrode, a brush and an endoscopic forceps. The fistuloscope has a diameter of 3,3 × 4,7 mm and length of 18 cm. This device is equipped with two taps, one of them being connected to one washing solution of glycine 1,5% or mannitol 1%. The surgical steps are divided into two stages: the first stage for diagnostic study and the second for treatment.

### Stage of diagnosis

The patient is placed in the lithotomy position after spinal anesthesia. Then, the surgeon identifies the external orifice through which the fistuloscope will be introduced. The infusion of glycine solution is started, enabling the direct visualization of the fistulous lumen by a continuous jet of irrigation solution. The device is introduced in search of the fistulous tract and of the internal orifice, as well as of accessory paths. After identifying the internal opening, it is isolated with sutures, still leaving the orifice open.

### Stage of treatment

In this phase the surgeon proceeds with the fulguration of the inner side of the fistulous tract. Using the monopole electrode, proceeds with destruction of all the tract under direct vision with cauterization of the bed. The procedure starts near the internal orifice, retreating little by little, until achieving the external orifice, concluding the cauterization. Following this, the necrotic material is removed by brushing and flushing with the washing solution. Finally, the internal orifice repair is pulled and, with the use of a stapler, the internal orifice closure is achieved; or a cutaneous-mucosal flap or orifice synthesis is performed.

## Discussion

To date there are few published papers in the literature concerning the VAAFT technique, and not one Brazilian publication. In our country, the arrival of the equipment in July, 2013, should encourage new publications. The first case of **video-assisted anal fistula treatment** was treated by our team at Hospital Santa Izabel on July 27, 2013.

In the world literature, the largest series was presented by Meinero in his first publication, with 136 cases of complex fistulas operated from May 2006 to May 2011. The highest incidence was found in males, with 70% of cases. The mean age of the population was 42 years, a finding very similar to our initial population. During Meinero's experience, there were no serious complications nor bleeding or infection. This author observed a case of urinary retention postoperatively with scrotal oedema due to infiltration with the irrigation solution. All patients were discharged in the very day of surgery and pain complaints were mild. The longest absenteeism period was of three days.

In his study, Meinero obtained a good response in 73.5% of patients after 2-3 months. In patients without fistula healing, 26.5% were reoperated by VAAFT. Overall, a healing response of 87.1%<sup>7</sup> was obtained.



**Fig. 1 – VAAFT video equipment manufactured by Karl Storz (Tuttlingen, Germany).**

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## Conclusion

The VAAFT technique is minimally invasive and quite safe. The technique has the benefit of being sphincter-saving, ending only with a very small wound. This technique allows the study of the entire fistulous tract, as well as the presence of accessory paths and collections with the help of the fistuloscope, thereby pinpointing the location of the internal opening to be treated.

The presented results are similar to the techniques of fistuloscopy and fistulotomy employed.

At this moment, there are few studies in the literature on VAAFT; however, this technique seems to be quite exciting. With the arrival of the equipment in Brazil, more procedures will be performed, with more publications. On the other hand, this will permit the follow-up of operated patients for an extended time.

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## Conflicts of interest

The authors declare no conflicts of interest.

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