



## Surgical Treatment of Anal Fissures: Population and Outcomes of an Ambulatory Surgical Center

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### Abstract

**Purpose:** To characterize the population of patients undergoing surgical treatment of anal fissures; to assess the outcomes and complications of the procedures in an ambulatory surgical center; and to evaluate the satisfaction degree of the patients.

**Methods:** Demographic data, type of procedure and complications of patients who underwent surgical treatment for anal fissures in the Integrated Center for Ambulatory Surgery of Centro Hospitalar do Porto - CICA-CHP) were reviewed. A questionnaire (created by the authors to assess the satisfaction, the quality of life and restrictions after the surgery and to identify the main advantages for an outpatient care) and the Cleveland Clinic Incontinence Score and the Fecal Incontinence Quality of Life Instrument (FIQLI) were applied.

**Results:** The study included 88 participants; the mean age was 47.2 years and 62.5% were female; 75% underwent lateral internal sphincterotomy (ELI) and 25% fissurectomy and V-Y. The global satisfaction was 9.6/10, the absence of hospitalization was considered an advantage (4.5/5), the mean period of inability for professional activities was 11.8 days; the pain was moderate (2.9/5) and the pain control with oral analgesics was classified in 4.5/5. In the FIQLI no one had concern about accidental bowel leakage nor felt sad in relation to its proctologic health. In the Cleveland Clinic Incontinence Score no patients referred incontinence.

**Conclusion:** The treatment of anal fissure has been evolving and with this work we realize that anal fissure surgery can be safely performed on an outpatient basis respecting the dignity and comfort of the patient.

**Keywords:** Anal fissure; Proctologic surgery; Lateral internal sphincterotomy; Fissurectomy; V-Y anoplasty

### Introduction

The anal fissure is one of the most common anorectal problems encountered in clinical practice. It represents an elongated ulcer of the anoderm that begins at or just below the dentate line and extends distally to the external anal margin [1,2]. Anal fissure can be medical management in the acute fissure or surgical management in chronic one's [3]. The surgical procedures for the treatment of proctologic pathology have been developed in the last years, in order to minimize some complications such as postoperative pain and bleeding, increase the comfort of patients and enable a faster recovery [4]. Because of this, most of proctologic cases are now performing as day case surgery [1]. The aims of the study were characterize the population of patients undergoing surgical treatment of anal fissures and assess the outcomes and complications of the procedures in an ambulatory surgical center. Additionally, we intended to evaluate the satisfaction degree of the patients.

### Material and Methods

Medical records of patients who underwent surgical treatment for anal fissures in the Integrated Center for Ambulatory Surgery of Centro Hospitalar do Porto - CICA-CHP), from March/2011 to July/2014, were reviewed; and demographic data, type of procedure and complications were collected. Then, a questionnaire was created by the authors (Annex 1) to assess the satisfaction of the patients with the procedure, the institution and the health providers; to evaluate the quality of life after the surgery including the pain management, the restrictions to the daily life or

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**Table 1:** Distribution of the surgical treatment of anal fissures in the ambulatory surgical center by gender.

Surgical Technique	Female	Male	Total
Lateral Internal Sphincterotomy	38 (43.18%)	28 (31.82%)	66 (75%)
Fissurectomy and V-Y anoplasty	17 (19.32%)	5 (5.68%)	22 (25%)
Total	55 (62.50%)	33 (37.50%)	88 (100%)

**Table 2:** Global satisfaction degree with the overall experience in the CICA-CHP.

	Mean	Standard deviation	Mode	Minimum	Maxima
Global satisfaction	9.6	0.66	10	8	10

**Table 3:** Satisfaction degree with the absence of hospitalization for surgical treatment of anal fissures.

	Mean	Standard deviation	Mode	Minimum	Maxima
Absence of hospitalization (Advantage)	4.5	0.80	5	1	5

**Table 4:** Cleveland Clinic Incontinence Score.

	Never	Rarely	Sometimes	Usually	Always
Solid stool leakage	88	0	0	0	0
Liquid stool leakage	88	0	0	0	0
Gas leakage	88	0	0	0	0
Pad use (for stool)	88	0	0	0	0
Lifestyle restriction	88	0	0	0	0

professional activities and the need to go to the urgency department for any complication; and finally to identify the main advantages for an outpatient care. Furthermore, the patients have to answer the Cleveland Clinic Incontinence Score and the Fecal Incontinence Quality of Life Instrument (FIQLI). Both questionnaires were anonymous and applied telephonically. The data was statistically analyzed through SPSS.

## Results

During the study period, 91 patients underwent surgical treatment of anal fissures; of these 88 answered the questionnaire and 3 never replied the call.

The mean ( $\pm$ SD) age of the patients was 47.2 ( $\pm$ 13.7) years, with the mode being the 55 years; 62.5% were female. The most used surgical technique was the lateral internal sphincterotomy (ELI) in 75% of patients; the remaining 25% cases underwent fissurectomy and V-Y anoplasty (Table 1).

In the field of global satisfaction we evaluated the overall experience of the CICA-CHP and we obtained a mean satisfaction of 9.6/10 (mode of 10) (Table 2). Most patients referred the absence of hospitalization an advantage for these surgeries, with a mean classification of 4.5/5 (mode of 5) (Table 3).

The mean period of inability for daily life or professional activities was 11.8 days. Eight patients needed to be attended in urgency department in the immediate postoperative period due to bleeding (n=5), infection (n=2) and dehiscence of the wound (n=1); however, there was no need of invasive measures, such as surgery, or hospitalization. The mean pain intensity was 2.9/5; though, using the oral analgesics that were prescribed the patients reported a great pain relief, with a mean of 4.5/5 (mode 5) for the relief degree. Regarding the FIQLI, 86.3% of patients considered their general health good or

**Table 5:** Recurrence rate of the anal fissure by surgical technique.

Recurrence Fissure	Yes	No	Total
Lateral Internal Sphincterotomy	2 (2.27%)	64 (75%)	66 (75%)
Fissurectomy and V-Y anoplasty	1 (1.14%)	21 (23.86%)	22 (25%)
Total	3 (3.41%)	85 (96.59%)	88 (100%)

very good; no one had concern about accidental bowel leakage nor felt sad in relation to its proctologic health. In the Cleveland Clinic Incontinence Score patients referred incontinence (Table 4). The recurrence rate of the fissure was 3.4% (n=3); of these 67% were submitted to ELI while 33% to fissurectomy and V-Y anoplasty.

## Discussion

The epidemiological data presented in our study are identical to those described in the literature, specifically the predominance of the female gender in anal fissures of 58% [5] are closely to our 62.5% of cases. The age obtained a peak incidence at 47.2 years, slightly above the average reported in the literature of 35 years [5].

To our knowledge there are no other studies evaluating the satisfaction degree of patients submitted to surgical treatment of anal fissures in an ambulatory center.

In the literature patients who undergo an anal fissure surgical procedure evidence acute pain in more than 80% of cases and in 75% of these, the pain was classified as severe or very severe [6,7]. Evidence also suggests that less than half of the patients obtains relief of the postoperative pain, even using the prescribed analgesic drugs [6].

In our study, patients achieved an excellent pain control with the oral analgesia prescribed, classified in 4.5/5; furthermore, the mean pain level without medication was moderated (2.9/5).

Our evaluation demonstrated the satisfaction of the patients with the ambulatory surgical center (9.6/10), considering the absence of hospitalization an advantage (4.5/5) for this type of surgery.

One of the most feared complications for anorectal surgeons is the anal incontinence, thus we decided evaluate it using the Cleveland Clinic Incontinence Score and no patients reported incontinence attesting very good results. Reviewing the literature the rate of incontinence after ELI runs the 3-45% and after fissurectomy with or without V-Y anoplasty the incontinence rate is about 33%, [8,9] quite different from the results we have obtained.

The treatment of anal fissure has been evolving and with this work we realize that anal fissure surgery can be safely performed on an outpatient basis respecting the dignity and comfort of the patient.

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