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## Original Article

# Anal fistula surgery in an outpatient setting: the Dubai experience



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### ABSTRACT

**Aim:** To determine whether surgery for transsphincteric and complex fistula-in-ano can be performed safely as a day case.

**Method:** This is a retrospective study of 66 patients with transsphincteric and complex anal fistulas, initially managed with preliminary loose Seton followed by fistulectomy and sphincter repair 2–4 months later between March 2011 and March 2014. Patients were seen at the clinic 1 week, 3 months and 1 year post-operatively and were observed for complications and recurrences; incontinence was noted down and was graded according to the Cleveland Clinic score.

**Result:** Twenty-five patients (38%) had high or complex fistulas and 32 (48.5%) had a history of previous surgery. All cases were done in an outpatient setting. The Seton was kept in situ for 2–5 months (2.6 months) followed by fistulectomy and sphincter repair. Complete healing was achieved within approximately 3.6 weeks (2–8 weeks). Fifty-one patients were followed up successfully for one year. Two patients had temporary flatus incontinence which had resolved over 2–3 months. Recurrence had occurred in 2 (3.9%) patients.

**Conclusion:** Transsphincteric and complex fistulas can safely be operated on as day case surgeries with high patient satisfaction and less complication in the population we studied.

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## Cirurgia de fístula anal em regime ambulatorial: a experiência Dubai

### RESUMO

**Objetivo:** Determinar se cirurgias para fístulas transesfincterianas e para fístulae in ano complexas podem ser realizadas com segurança em ambiente ambulatorial, sem pernoite do paciente no hospital.

**Método:** Trata-se de um estudo retrospectivo de 66 pacientes com fístulas transesfincterianas e fístulas anais complexas, inicialmente tratados preliminarmente com seton de drenagem, seguido por fistulectomia e reparo do esfíncter 2–4 meses mais tarde, entre março de 2011 e março de 2014. Os pacientes foram reexaminados no ambulatório uma semana, três meses

#### Palavras-chave:

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e ano após a cirurgia, tendo sido observados para complicações e recorrências; casos de incontinência foram anotados e classificados de acordo com o escore da Cleveland Clinic.

**Resultado:** Vinte e cinco pacientes (38%) apresentaram fístulas altas ou complexas e 32 (48,5%) tinham história de cirurgia prévia. Todos os casos foram tratados em ambiente ambulatorial. O seton foi mantido in situ durante 2-5 meses (2,6 meses), seguido por fistulectomia e reparo do esfíncter. A cura completa se concretizou em cerca de 3,6 semanas (2-8 semanas). Cinquenta e um pacientes foram acompanhados com sucesso ao longo de um ano. Dois pacientes tiveram incontinência temporária para gases, resolvida ao longo de 2-3 meses. Recorrência ocorreu em 2 (3,9%) pacientes.

**Conclusão:** Fístulas transesfíncterianas e fístulas complexas podem ser operadas com segurança como casos ambulatoriais, sem permanência hospitalar noturna, com grande satisfação do paciente e menos complicações na população estudada.

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## Introduction

Most of the proctology cases nowadays are done as day case surgeries without any significant complications. Normally, 'lay-open' fistulotomies and fistulectomies for inter-sphincteric fistulas are done as day cases. High trans-sphincteric and complicated fistulas, which required division of a large portion of the external sphincter, were done as inpatient surgeries mainly due to the fear of incontinence and postoperative pain. The aim of surgical treatment of anal fistula is to cure the disease by preventing recurrence while simultaneously ensuring that fecal continence is maintained. The incidence of post-operative fecal incontinence following fistulectomy has been reported to be 20.3%.<sup>1</sup> It is still not clear which approach is safest to be performed as a day case surgery in terms of risk of immediate or early post-operative complications, as those complications could affect the outcome of the surgery. The optimal treatment of anal fistulas should include minimal complications, low recurrence rates, no hospital admissions and negligible patient inconveniences. The aim of this study is to present an experience of treating fistula-in-ano in an outpatient setting.

## Method

Data were collected from records of 66 patients who underwent preliminary Seton placement followed by fistulectomy and sphincter repair 2-4 months later between March 2011 and March 2014. Fistulas were characterized using Parks' Classification. Perianal fistulas were defined as complex if they had multiple external openings, high fistulas if they had an internal opening at the level of the dentate line and low fistulas if they had an internal opening below the dentate line. Patients with concomitant anal pathology or inflammatory bowel disease were excluded from the study. Low fistulas, which were treated by the lay open technique, were also excluded. All patients had an ASA physical status classification of less than 3.

The procedure was performed under general anesthesia with the patient in lithotomy position. After initial evaluation,

the external and internal openings were located using a probe and air injection along the tract. A loose Seton was inserted under general anesthesia using 2 braided, non-absorbable sutures (4/0 prolene), which were looped around the fistula tract. It was not tightened at any time during the follow-up nor was it removed until the time of fistulectomy. Two to four months later the complete fistula was excised with immediate repair of the sphincters and the wound was kept open. Seton insertion and fistulectomy were done as day cases. The patients were observed for 4-6 h and were then discharged.

Patients were reviewed at the clinic 1 week, 3 months and 1 year post operatively. During the follow-up period, details of healing (i.e. absence of discharge), recurrence, and complications were gathered. Continence was evaluated according to the Cleveland Clinic score.<sup>2</sup> The excised fistulas were sent for histopathology to rule out inflammatory bowel disease and cancer.

Finally, the data were analyzed using IBM SPSS STATISTICS BASE 21.

## Results

After obtaining the ethical committee approval, 66 patients with transsphincteric and complex anal fistulas who were managed with preliminary loose Seton followed by fistulectomy and sphincter repair, were reviewed. Fifty-nine (89.4%) of the patients were male and 7 (10.6%) were female. The overall mean age was 38.5 (range 25-61) years. The types of fistulas are depicted in [Table 1](#).

Thirty-two (48.5%) patients gave a history of previous surgery, 27 of which had incision and drainage of perianal abscesses and 5 of which had previous fistula surgeries. The

**Table 1 – Type of fistulas.**

Type of fistula	Number	Percent
Low transsphincteric	41	62
High transsphincteric	13	20
Complex	12	18
Total	66	100

Seton was inserted and kept in situ for 2–5 months (average 2.6 months). The second procedure consisted of fistulectomy and sphincter repair; all cases were done as day cases and were performed under general anesthesia.

During the follow-up period there were no significant complications. Four (6%) patients experienced significant post-operative pain, which required oral nonsteroidal anti-inflammatory medications and acetaminophens. Three patients (4.5%) had minimal bleeding which was controlled by pressure dressing alone. The complete healing time of the wound was between 2 and 8 weeks (average 3.5 weeks) in which no more dressing was required.

Fifty-one (77.3%) patients completed a follow up of 12–24 months (mean 16 months); they were assessed for recurrence and presence of incontinence. While two patients (3.9%) reported a transient incontinence of gas in the immediate postoperative period (scores 3 and 4, respectively according to the Cleveland Incontinence Score), they had completely recovered by 3 months postoperative. The fistulas were completely cured in 49 (96.1%) of the patients. Recurrence occurred in only two patients (3.9%); one of them was re-operated using the same procedure – loose Seton for 4 months followed by fistulectomy and sphincter repair – for which during the follow-up he did not have any remaining signs of recurrence, while the other patient went through another fistulectomy without preliminary Seton in another hospital and continued to have recurrence.

Patients were interviewed for their satisfaction of the procedure being done as a day case and 64 out of the 66 were satisfied. Two patients preferred the surgery to be done in an inpatient setting in order to receive postoperative analgesia and rest.

## Discussion

In a busy hospital where the shortage of beds is the main issue, the admission of such cases was increasing the load and the cost on hospital resources. In addition, the number of cases that would have been operated on would have been far less due to the long waiting list for admission. Before 2011, all cases of fistulas were done as inpatient and between January 2010 and February 2011; only 8 fistula cases were admitted and operated on. The number of admission days varies between 2 and 5 days (a mean of 3 days).

The strategy to operate transsphincteric and complex anal fistulas as day cases started in March 2011, and up until March 2014 the number of cases done on an outpatient basis had increased to 66 cases. This strategy had aided the hospital management to improve the bed occupancy rate and in turn, the cost effectiveness.

A day care clinic is defined as an institution in which patients undergo elective operations on the day of their admission and are discharged within 24 h of the surgery.<sup>3</sup>

Nowadays, proctologic conditions are increasingly managed on an outpatient basis. This has been associated with a successful postoperative outcome. Several factors play a role in this recent increase, such as modern anesthetic procedures, short operation time and a low complication rates. Careful patient selection remains the key to a successful outcome.

In Coloproctology, the high incidence of anorectal disorders and the economic impact of various types of surgical treatment have motivated attempts to discover possibilities of outpatient management. While 30–50% of all surgeries can be safely done in outpatient sectors, this rate reaches 90% in the case of anorectal operations.<sup>4</sup> Among all the surgical specialties, anorectal surgery has benefited the most from the use of local anesthesia and ambulatory surgery. Many studies agree that the outpatient environment is safe for anorectal surgery.<sup>5</sup>

Despite the social, economic and medical advantages of ambulatory proctologic surgery, the majority of surgeons are reluctant to put this into practice for several reasons such as difficulty in assuring adequate pain control, fear of postoperative complications, and the lack of patient's dissemination knowledge about safety and feasibility of day care surgeries.<sup>6</sup>

Several studies have been conducted to analyze the feasibility of day case surgeries in proctology. Different procedures have been tested such as haemorrhoidectomy, sphincterotomy, anorectal polyp excision and pilonidal sinus surgery.

In regards to fistula-in-ano surgeries, its feasibility has been proven in several studies. In the study by Carditello et al.<sup>7</sup> 172 fistulas-in-ano have been operated on in an outpatient setting. Thirty-four percent of patients were hospitalized for 24 h, while the remaining was hospitalized for 7–10 h. No considerable complications have been documented apart from postoperative pain.

In a paper written by Gupta et al., the mean hospital stay was 7.3 h (range 4–21 h) while the overall complication rate was 2.5%, which included bleeding, urinary retention, infection, continence problems and recurrence.<sup>8</sup>

## Conclusion

Transsphincteric and complex anal fistulas can be treated safely and effectively in an outpatient setting with less complication and with high patient satisfaction in the population we studied. It was proven to be cost effective and improved the hospital capacity.

## Conflicts of interest

The authors declare no conflicts of interest.

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