



Semi-closed surgical technique for treatment of pilonidal sinus disease



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HIGHLIGHTS

- Ideal treatment of PSD is controversial, despite a number of surgical techniques described in medical literature, due to high recurrence rates.
- This study provides an alternate semi-closed method for treatment of pilonidal sinus.
- Results indicate both a satisfactory aesthetic result for the patient and prompt return to everyday activities.

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ABSTRACT

Introduction: Pilonidal sinus disease (PSD) is a highly debatable disorder regarding its surgical management, despite an assortment of surgical techniques described in the medical literature. The aim of this report is to provide an alternate semi-closed surgical method for treatment of PSD, with early recovery and a satisfactory cosmetic result.

Methods: In this retrospective study, 34 patients underwent surgical treatment for primary PSD; 32 male and 2 female. Patients were suffering from primary PSD, with the cyst located in the gluteal midline. Total excision of the cyst was performed, while the skin flaps were fixed on the postsacral fascia using absorbable sutures, leaving the wound semi-closed.

Results: Technical success was 100%, with an average operation time of 48.7 ± 3.8 min. No wound dehiscence or infections were recorded postoperatively. One reoperation was performed due to hemorrhage. All patients were discharged on the day after surgery, with a VAS pain score of 1.3 ± 1 . Two incidents of late wound dehiscence were recorded at 4th and 6th postoperative day due to strenuous exercise. Patients resumed their work after the 5th postoperative day with no complications. The 6 month follow up was completed in 29 patients, with a VAS cosmetic score of 8.1 ± 0.9 . No recurrences were observed during the follow up period.

Conclusion: The presented semi-closed technique is a viable alternative for surgical management of PSD. It provides patients with a satisfying cosmetic result, while it allows for early and safe return to everyday activities with less pain experienced.

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1. Introduction

Pilonidal sinus disease (PSD) is an acquired chronic disorder located in the natal cleft, with its etiology based on the presence of hair follicles in the gluteal crease [1]. Accumulation of hair over time, along with dirt and sweating of the area, leads to the creation

of a subcutaneous cyst in the intergluteal region. Natural progression of the disease leads to the formation of a sinus, as the cyst tries to exude itself [1,2]. A pilonidal cyst can get inflamed thus forming an abscess requiring surgical drainage [3]. PSD shows a preference in young male population with a man to women ration of approximately 4 to 1 [2,4]. It is also associated with certain occupations involving a lot of time sitting, such as truck drivers, students and office workers [5,6]. PSD has a high social impact due to its location and presentation, with pain in the sacrococcygal region being the most common clinical symptom [5]. In the presence of a sinus, patients may also complain of dirty underwear due to the

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cyst exudation material.

A number of surgical techniques have been described for management of PSD, with no optimal method defined yet. Ideal treatment should aim in less pain, fewer complications, patients' promptly resume of normal activities, but most importantly low recurrence rates. Some of the most commonly used methods are Limberg's transposition flap, Karydaki's flap reconstruction and complete surgical excision of the cyst, with the wound left to heal under primary or secondary intention [7–11].

The aim of this study is to provide an alternate surgical method for treatment of primary PSD. Total excision of the cyst is performed, while the skin flaps are sutured on the postsacral fascia with absorbable sutures, leaving the wound semi-closed. All perioperative data were recorded and presented, along with a 6 month follow up.

2. Methods and materials

From September 2014 to January 2016, 113 patients were treated in our center for PSD. All patients were suffering from simple or

complex PSD, with or without the presence of a pilonidal sinus, while 18 of the patients had recurrent disease. Patients included in the study suffered from simple symptomatic, primary PSD, with the cyst located in the gluteal midline. Patient demographics along with inclusion and exclusion criteria are summarized in table (Table 1). Written consent was obtained from all patients prior to the operation.

All procedures were performed by DP, an experienced in pilonidal disease general surgeon (>10 operations/month). Preoperative workup included shaving of patients' sacrococcygeal region. The operation was conducted with the patient in prone position and the buttocks laterally retracted with adhesive tape for better exposure of the gluteal crease. After scrubbing the area with povidone iodine, local anesthetic (15 cc of lidocaine 2%) was administered. The pilonidal cyst was located through palpation, and a fusiform incision was performed, containing the cyst and any visible sinuses located in the intergluteal region. After cutting deep to the postsacral fascia, dissection of the cyst was gently performed with the help of the index finger, to avoid damage both to the fascia and the surrounding soft tissues (Fig. 1a, 1b, 1c). The cyst was completely excised, and any possible hemorrhage was controlled either with ligation or electrocauterization. The defect cavity was washed with hydrogen peroxide and further inspection of the cavity's lateral wall was performed through palpation, to detect any possible sinuses. The two skin flaps were fixed on the postsacral fascia with continuous subcutaneous suturing, using a 2-0 monofilament absorbable suture (Fig. 3a). The semi-closed wound was washed with povidone iodine and a compression bandage was applied containing a fucidine swab (see Fig. 2).

One dose of iv antibiotics (clindamidine 600 mg) was administered in all patients postoperatively. Mobilization commenced approximately 6 h after operation, while all patients were discharged on the 1st postoperative day, after inspection and change of the wound dressing with a povidone iodine gauze (Fig. 3b). At discharge, patients were asked about their overall postoperative

Table 1

Patients' demographics and inclusion – exclusion criteria.

Gender (male/female)	32/2
Age	24.4 ± 4.5
Duration of symptoms (months)	18.5 ± 10
Patients with visible sinus	28
Inclusion criteria	
• Primary disease	
• Symptomatic disease	
• Pilonidal cyst located in the gluteal midline	
Exclusion criteria	
• Recurrent disease	
• Presence of abscess	
• Pilonidal cyst located lateral of the gluteal crease	
• Patient's refusal	



a



b



c

Fig. 1. a, b, c. A. Marking of the incision containing the pilonidal cyst and 2 visible sinuses. B. Dissection of the cyst from the postsacral fascia. C. Complete excision of the cyst.

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