

Less is more: “incision and curettage” as an optimal procedure for recurrent pilonidal disease



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Less is more: “incision and curettage” as an optimal procedure for recurrent pilonidal disease

AIM: Although pilonidal disease has been a well-known entity for more than a century, recurrence of pilonidal disease is still not rare. The optimal surgical approach to recurrent disease is under debate. In this study, we aimed to investigate the efficacy of “incision and curettage” procedure for recurrent pilonidal disease.

MATERIAL AND METHODS: From May 2009 to May 2013, 42 patients (37 male/5 female) underwent surgical treatment for recurrent pilonidal disease. Incision and curettage of granulation tissue, hair and debris in the cavity were performed in all cases. Data collection included demographics, visual analogue scale (VAS) score, hospital stay, return to daily activities (lying, sitting down in comfort) and work, and complete wound healing time.

RESULTS: Mean operating time was 16.6 ± 4.7 (10-24) minutes. Mean pain score was 1.4 ± 1.1 (0-5) with VAS. The mean duration of returning to daily activities such as comfortable lying down, sitting and returning to work were 1.6 ± 0.8 (1-4) days, and 3.3 ± 2.3 (1-15) days, and 10.2 ± 5.4 (5-33) days, respectively. The mean wound healing time was 19.9 ± 7.8 (7-52) days. During the three-year follow-up period, no recurrence was observed.

DISCUSSION: “Incision and curettage” may be performed as first-line treatment for recurrent cases. It does not require surgical skill and can be easily applied in a short time.

CONCLUSION: This simple surgical option, incision curettage provides short hospital stay and quick return to daily activities, in addition to patient comfort and satisfaction.

KEY WORDS: Pilonidal sinus, Recurrence, Sacrococcygeal

Introduction

Pilonidal disease has been a well-known entity for more than a century. Although a wide variety of surgical options have been used for curative treatment of pilonidal disease, recurrence is still not rare¹. Since most of the recommendations are based on an expert

opinion, the optimal approach remains controversial. Likewise, management of recurrent disease is another ongoing debate. While some authors suggest lay open procedure or laser hair removal^{2,3}, the others prefer extensive procedures including various flap techniques for recurrent disease⁴⁻¹⁰.

Although there are great amount of publications about surgical treatment of primary pilonidal disease, management of recurrent disease has not yet been published in large series. We mostly advocate simple techniques rather than complex procedures due to distal extension of the fistulas, which causes a limitation to perform a flap procedure in recurrent patients. In this study, outcomes of a simple surgical approach, “incision and curettage (I&C)”, to treat recurrent pilonidal disease were investigated.

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Material and Methods

From May 2009 to May 2013, all patients who underwent surgical repair for recurrent pilonidal disease were evaluated. Recurrent pilonidal disease was defined as detection of any persistent leakage and presence of sinus pits on/nearby the previous surgical site. Patients whose surgical approach was I&C were included into the study. Data were obtained from IRB approved database and included patient's demographics, type of surgical treatment, time interval to recurrence, operating time, post-operative complications and hospital stay. In addition, healing time, time to return to daily activities and to work were also recorded. A visual analogue scale (VAS) scored on a 10-point numerical rating scale (0 indicates no pain, and 10 indicates worst pain) was used to measure the pain intensity. Pain levels were evaluated by VAS scoring on the first postoperative day. Continuous variables were presented as mean and standard deviation.

SURGICAL TECHNIQUE

One dose of prophylactic intravenous antibiotic (cefazolin 1 g) was administered 30 minutes before incision. On jack-knife position, adhesive tapes were anchored to the buttocks symmetrically at the sinus level. Buttocks were pushed laterally to maintain a good exposure in the course of fixing these tapes sidelong. After clipping

the surgical site and surrounding region, povidone-iodine solution was applied. A local anesthetic mixture consisting of 2% prilocaine hydrochloride (Citanest®, AstraZeneca, UK) and 0.5% bupivacaine (Marcaine®, AstraZeneca, UK) at a maximum dose of 20 ml was used for local anesthesia. The overlying skin of the sinus cavity was incised with the help of a thin metallic probe. All of the sinus tracts were unroofed completely and sinus pits were excised. The debridement of underlying granulation tissue, debris and hair components was performed with a curette (Fig. 1a, b). After meticulous homeostasis, wound was filled with moist gauze and covered with dressing. Oral analgesic (paracetamol, 500mg) was given twice daily. Additional analgesic requirement was recorded. Patients were discharged on the first postoperative day.

FOLLOW-UP

We recommended all patients to have shower and clean all the hair around the surgical site. We requested patients to come for an office visit twice in the first week. Then, until wound healing occurred, weekly follow-up was recommended (Fig. 1c, d and Fig. 2a, b). Incomplete wound healing was defined as prolonged (>60 days) or complicated healing process requiring additional surgical intervention. All patients were given a phone call to record any wound-related problem at June 2014. The mean follow-up time was 37 ± 8.6 (13-61) months.

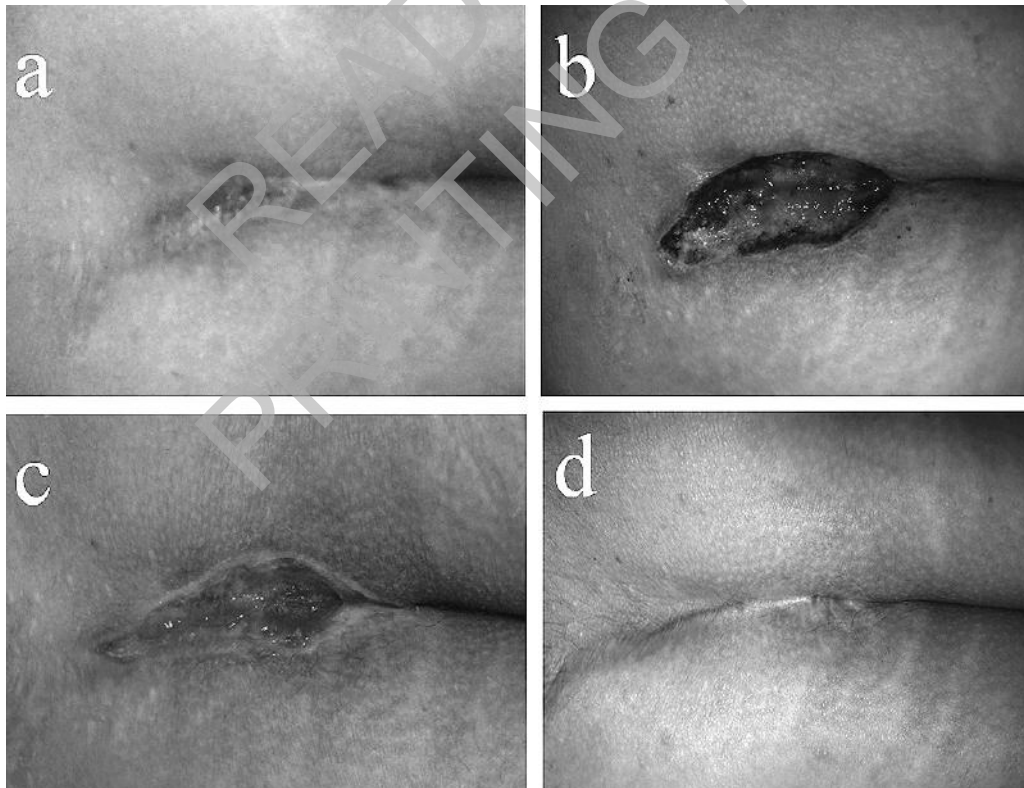


Fig. 1: Patient with recurrence after primary repair, a) preoperative, b) on the postoperative day 1, c) on the postoperative day 14, d) on the postoperative day 30 (complete healing).

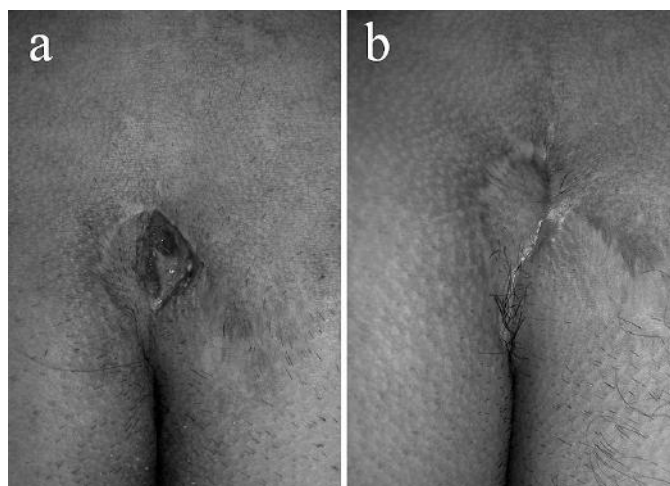


Fig. 2: Demonstration of the wound healing process after I&C in patient with recurrence after flap repair, a) on the postoperative day 7, b) on the postoperative day 35 (complete healing).

Results

In a period of 48 months, 42 patients (5 female and 37 male patients) with a mean age of 27.1 ± 7.2 (17-53) years underwent surgical treatment for recurrent pilonidal disease. Mean time interval between previous operation and onset of recurrence was 13.4 ± 9.3 (6-48) months. Previous surgical procedures of the recurrent patients were demonstrated in Fig. 3.

Mean operating time was 16.6 ± 4.7 (10-24) minutes. The average VAS score was calculated as 1.4 ± 1.1 (0-5) (Fig. 4). Four (9.5%) patients needed additional analgesic requirement. The rate of postoperative complication was 4.8%. Two patients experienced hemorrhage on the first operation day. It was managed with pressure dressing on the wound. No further treatment was required. There was no surgical site infection.

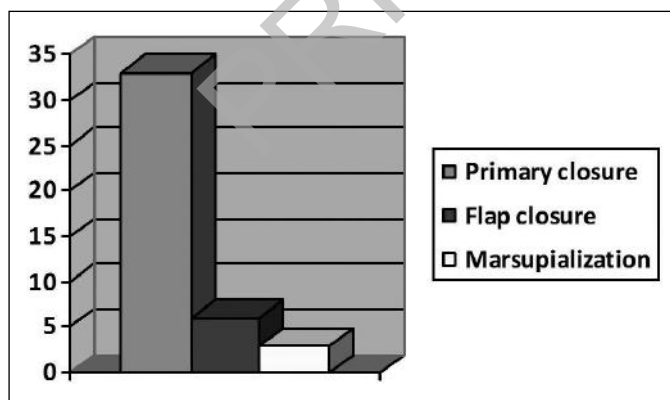


Fig. 3: Previous surgical procedure of recurrent patients (n=42).

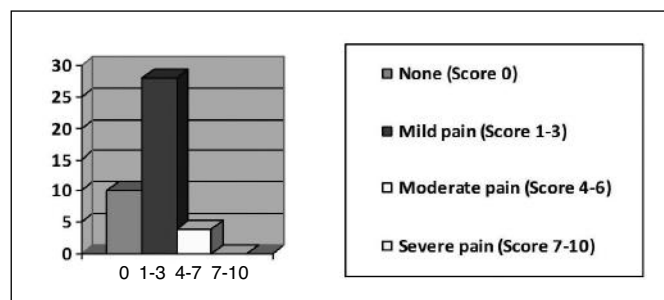


Fig. 4: VAS score distribution of the patients (Average VAS score was 1.4 ± 1.1), (n=42)

TABLE I - Time to return to daily activities, return to work, and wound healing time of the patients.

Lie down (mean $\pm$ SD), days	1.6 ± 0.8 (1-4)
Sit down (mean $\pm$ SD), days	3.3 ± 2.3 (1-15)
Return to work (mean $\pm$ SD), days	10.2 ± 5.4 (5-33)
Mean wound healing time (mean $\pm$ SD), days	19.9 ± 7.8 (7-52)

The mean time for daily activities such as comfortable lying down, sitting and returning to work were as follows; 1.6 ± 0.8 (1-4) days, and 3.3 ± 2.3 (1-15) days, 10.2 ± 5.4 (5-33) days, respectively. The mean wound healing time was 19.9 ± 7.8 (7-52) days (Table I). During follow-up period, no recurrence was observed.

Discussion

A wide variety of surgical strategies to repair of pilonidal disease have been reported throughout years. None of them have proved to be completely successful, or free of recurrence. In the published literature, recurrence rate has been reported between 0% and 43%^{1,6}. Wide excision of effected tissue down to the presacralis fascia is preferable by most of the authors. When it comes to manage the wound after surgical excision, whether the primary (primary closure or flap procedures) or secondary intention (spontaneous healing, namely lay open procedure) is still matter of debate. Both procedures have advantages and disadvantages. The former provides shorter time for wound healing but causes higher recurrence risk compared to lay open. On the other side, the latter technique requires long time for complete healing and can develop subsequent loss of workforce, whereas it results in a remarkably low recurrence rate¹.

Surgical approach to the recurrences is another troublesome issue. For recurrent cases, many authors have sug-

gested flap procedures for treatment ⁴⁻⁸, whereas others have advocated modified kinds of previously known techniques ^{9,10} and conservative approaches such as laser epilation³. Flap techniques have the major drawbacks of a larger scar, longer hospital stay, longer duration of bed rest, and longer periods off work ². Khatri et al ⁷ performed a more extensive approach on a few patients, a V-Y fasciocutaneous flap for recurrent pilonidal disease. However, when compared with the duration of their mean 170 minutes operation time, we managed a significantly shorter operating time. In another flap series by El-Khadrawy et al ⁶, prolonged time for hospital stay (mean 6 days) and return to work (15 days) were reported. These parameters were acceptable in our study; all patients were discharged on the postoperative day 1 and mean return to work was in 10 days. In this technique, wound-healing time also decreases because sinus pouch is not excised with surrounding fat tissue, but only debrided.

Reconstructive flap techniques are technically complex and have higher rates of wound related complications such as infection, seroma, hematoma, wound separation, and necrosis ². Recurrence rates with rhomboid flap closure were reported between 1-10% ⁵⁻⁶. Using this technique, we avoid creation of a deep cavity of which cleaning procedure is difficult. In addition, observation of possible complication mentioned above is also available. In this study, two patients (4.8%) experienced postoperative hemorrhage that could be successfully managed without re-operation.

Bascom ¹¹ technique is one of the most popular modified techniques. Theodoropoulos et al ⁹ suggested modified Bascom asymmetric midgluteal cleft closure technique, which could be used reliably as a second-line surgical treatment for recurrent disease before more complex flap techniques. They reported no complication, but one patient with delayed wound healing.

As we suggested I&C technique for recurrent patients, Kepenekci et al ² reported that unroofing and curettage procedures should be preferred as first choice for all patients with pilonidal disease, regardless of the condition of the wound at initial presentation (acute, recurrent, or chronic). The authors reported 25 recurrent cases with no further recurrences. Likewise, Gencosmanoglu et al ¹² preferred a modified lay-open technique (incision, curettage, partial lateral wall excision and marsupialization) for recurrent cases. Furthermore, they noted that longer healing time did not cause prolonged time to return to work and social activities. In our study, marsupialization was not performed. Nevertheless, it is a painful procedure for patients in the postoperative period and takes long time to perform.

Predisposing factors for recurrence were determined as overlooking any tract during the initial operation, surgical site infection or abscess formation ¹³. Multiple openings were frequently observed in recurrent cases ^{6,13,14}. Some authors suggested wide excision with flap reconstruction in primary

cases with complicated pilonidal disease ^{14,15}. By using I&C technique, all tracts and fistulas are observed and incised. In addition, as wound healing begins from the bottom, death space, which can lead infection or abscess formation, is prevented. On every office visit, wound is checked, and, hair, debris, and early tissue bridges are removed. In our series, there were no recurrences in the follow-up period.

Theodoropoulos et al ⁹ and Hull et al ¹⁶ suggested that the logical approach is to start with a simple technique and to progress to more sophisticated methods. Since June 2009, we have started an observational prospective cohort study to clarify the optimal surgical procedure for recurrent pilonidal sinus based on the simplicity. The advantages are as follows; being easy to perform, no need for experience such as in flap techniques, no need for regional anesthesia, short hospital stay and early return back to daily activities and work.

Conclusion

We believe that, the outcome of incision and curettage of the sinus cavity in recurrent pilonidal sinus results in highly satisfying outcome. This technique can be an alternative minimal invasive approach for radical treatment for recurrent pilonidal disease.

Riassunto

Sebbene il *sinus pilonidalis* sia una patologia ben conosciuta da più di un secolo, la recidiva dopo trattamento non è per questo diventata rara, ed è in discussione quale sia il miglior trattamento chirurgico in tali casi. Con il presente studio si è cercato di valutare l'efficacia di un trattamento caratterizzato da incisione e curettage.

Tra maggio 2009 e maggio 2013 abbiamo sottoposto a trattamento chirurgico 42 pazienti (37 uomini e 5 donne) ad un trattamento chirurgico per sinus pilonidalis recidivo. In tutti i casi è stata eseguita un'incisione chirurgica ed il curettage del tessuto di granulazione, con asportazione dei peli e dei detriti. La documentazione comprende i dati demografici, il punteggio secondo la scala analogica visiva (VAS), la durata della degenza ospedaliera, il ritorno alle attività quotidiane (decubito e stazione seduta normale), il ritorno al lavoro ed il tempo totale di guarigione della ferita.

La durata media dell'intervento è stata di 16.6±4.7 minuti (da 10 a 24).

Il punteggio medio del dolore è stato di 1.4±1.1 (compreso tra 0 e 5) calcolato con VAS. Il tempo medio per il ritorno alle attività quotidiane come il decubito normale, la stazione seduta ed il ritorno al lavoro è stato rispettivamente di 1.6±0.8 giorni (tra 1 e 4), di 3.3±2.3 giorni (tra 1 e 15) e di 10.2±5.4 giorni (tra 5 e 33).

Il tempo medio di guarigione della ferita è stato di 19.9 ± 7.8 giorni (tra 7 e 52). Durante i successivi tre anni di follow-up non è stata osservata alcuna recidiva. L'incisione e il curettage può essere utilizzato come trattamento di prima istanza in caso di sinus pilonidalis ricorrente. Non richiede una particolare abilità chirurgica e può essere realizzato in tempi brevi.

Questa semplice opzione chirurgica consente una degenza breve, un rapido ritorno alle attività quotidiane, oltre al gradimento ed alla soddisfazione dei pazienti.

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