

Crystalline Phenol Practices and Clinical Results in our Patients with Pilonidal Sinus

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Abstract

Background: Pilonidal sinus disease is a chronic disease frequently encountered in the sacrococcygeal region. Although many surgical techniques have been described, none of these techniques are considered as an ideal technique in the surgical treatment of pilonidal sinus and are minimally invasive.

Material and Methods: In this study, our cases, who we performed crystallized phenol between the years of 2012-2014 in our clinic by believing that it had minimally invasive nature, were evaluated retrospectively and our operating technique was described.

Results: In our study, a total of 35 patients (25 men and 10 women) were included in the study. Orifices were extended by using clamps. After removing hairs and cleaning of inside of local sinus, phenol crystals were pushed into the sinus via orifices with the help of clamp, then liquid phenol in the sinus was removed with debris inside the sinus. Patients were followed up after early period control, symptoms and relapses were assessed. The average follow-up time was 12 months and the recurrence rate was 11.7%. The different surgical methods were previously applied to 5 patients of 35 patients, recurrence was seen in one patients of 4 patients with recurrence. Two of these 5 patients underwent crystallized phenol application again and 3 patients underwent excision and wound was left for secondary healing.

Discussion: It has been considered that phenol application was suitable method when phenol application was compared with more invasive surgical procedures, such as primary repair after sinus excision, secondary healing after excision and marsupialization or flip-flap after excision due to be able to apply easily in the treatment of pilonidal sinus, lack of tissue loss and associated complications due to it does not require resection, having more aesthetically acceptable results and the low recurrence and complication rate and one of the most important features of this method was that it eliminated the need for surgery with minimally invasive method for a disease require surgical intervention.

Keywords: Pilonidal sinus, Cyst, Abscess, Surgery

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Introduction

Pilonidal sinus disease was defined for the first time in 1833 by the Mayo as "a sinus containing hair" [1]. However, this disease, in the sense of today, was used by Hodges for the first time in 1880 [2]. Pilonidal sinus disease is a chronic disease frequently encountered in the sacrococcygeal region, in our country which has difficulty socially and affects living comfort negatively.

Development of malignancy is extremely rare and is most often in the form of squamous cell carcinoma. Since 1900 that it was first described, about 100 cases have been reported [3]. Although many surgical methods have been developed on the subject, an ideal method of treatment was still not found due to the postoperative healing process, wound care, complications and high recurrence rates. As surgical treatment, many surgical

techniques have been described such as secondary healing after excision of the sinus, primary closure and flip-flap. All of these techniques have various rates of morbidity and mortality and are not minimally invasive. None of these techniques are accepted as the ideal technique in the surgical treatment of pilonidal sinus [4]. As a result, the ideal operation should be simple, contain low recurrence rate, not cause loss of labor force and be fairly economic [5,6]. In this study, the patients, who underwent crystallized phenol treatment in our clinic by believing that they had minimally invasive nature, were evaluated.

Material and Methods

In this study, our cases, who we performed crystallized phenol between the years of 2012-2014 in our clinic, were evaluated retrospectively. Demographic characteristics, morbidity and mortality were examined in our patients and our operating technique was described.

Results

In our study, a total of 35 patients (25 men and 10 women) were included in the study. Four of the male patients were previously treated with invasive surgical procedures and disease relapsed. One of them underwent secondary healing after limberg flap, one of them underwent limberg flap and primary closure. It has been provided to clean the surgical sites of patients from the upper part of gluteus to anal region by depilatory creams or shaving. In cultures taken in pilonidal sinus disease, aerobic or anaerobic microorganisms reproduce [5]. Therefore, antibiotic prophylaxis may be done. For prophylactic measures, first-generation cephalosporins may be used [7-9]. In our study, 1 g of intravenous cefazolin was administered to patients for prophylaxis. Spinal anesthesia and local anesthesia were used in 25 and 9 patients, respectively. The diameter of the office was extended up to about 3 mm by using the clamp after spinal or local anesthesia. Then the direction of the sinus was determined with the help clamp and all hairs in the sinus have been removed by trying not to damage the epithelium within the sinus and inside part of the sinus was irrigated with saline solution. After removing hairs and local cleaning of inside of the sinus, the orifice and the skin of surrounding areas where, crystalline phenol will be applied, were protected by an antibiotic ointment. Then, phenol crystals were pushed into the sinus through the orifice or orifices. Phenol which becomes liquid at body temperature fills the inside of sinus and reaches all sinus epithelium. After waiting at least an average of 3 minute, liquid phenol in the sinus was removed and cleaned with the debris inside the sinus. The patients, who underwent surgery with local anesthesia, were discharged after within an average of 30 minutes due to the sedation given; the patients, who underwent surgery with spinal anesthesia were discharged the next day because of the risk of spinal anesthesia complications. Patients were invited for control after 1 week to 10 days. Application was made under local anesthesia for 18 patients again. The patients were checked in terms of control of sinus and abscess formation after 1 week to 10 days.

After completion of therapy, the patients were followed at 3, 6, 9, 12 and 15 months and re-evaluated to see if there is any

recurrence. Patients were evaluated during follow-up with questions such as pain, bleeding, redness, swelling, irritation, itching, purulent or serous discharge. The mean follow-up period was 12 months, the recurrence rate was found to be 11.7 per cent. The different surgical methods were previously applied to 5 patients of 35 patients, recurrence was seen in one patients of 4 patients with recurrence. Two of these 5 patients underwent crystallized phenol application again in the postoperative 6th and 9th months and 3 patients underwent excision and wound was left for secondary healing.

Discussion

In our discussion, we would like to investigate briefly the surgical procedures and then make a comparative discussion with the method that we have applied.

Primary suture after excision of the sinus

The surgical resection is required. Defect occurs in the skin, this defect is closed by the primary suturation. It should be avoided to remain dead space in the incision [10].

wound healing problems such as wound infection and wound separation, which are the major complications seen after primary closure method, can be seen by 11-34% after primary closure technique. The rates of recurrence and wound infection are 16% [11] and 9,1% [12] in this process. Labor force loss is about 12 days.

Secondary healing and marsupialization after sinus excision

The recurrence rate in the open method in 6 weeks is 1-19% and the required time for the healing of wound healing after surgical resection is 27 days [13,14], the recurrence rate in marsupialization in 4-5 weeks is 1-6% [15-17]. The patient needs to rest with open wounds and can not work during this time and can not resume as an active to daily life. Labor force loss and financial loss come forward.

Flip-flap after excision of the sinus

Many flap procedures have been described such as Z-plasty, VY plasty flap and Rhomboid flap (the Limberg flap is the the most popular). More extensive surgical dissection is required to close the defect occurred after resection. Infections can be seen such as wound infection, flap necrosis, wound dehiscence and sepsis. The incision scars depending on the flap incision, which are cosmetically unpleasant, are seen in the gluteal region after wound healing [18]. The most important complication seen in Limberg flap, which is the most commonly used method, is seroma and wound dehiscence [19], the recurrence rate is about 5% [20].

In our study, a minimally invasive method is presented. A deformity in the gluteal appearance aesthetically was not detected after healing in our patients. Extensive tissue loss and defect do not occur due to resection is not required. Surgical excision was performed for 3 patients that recurrence was seen. However, in other words, we want to emphasize that we have protected 30 patients that recurrence was not seen and 2 patients that recurrence was seen from surgical interventions.

The history of the disease, duration, presence of abscess history, the number of orifices, midline distance of the orifice, anus proximity of the orifice, the patient's skin structure and hair growth level have been identified as factors affecting of recurrence. Moreover, it has been seen that the additional illnesses that prevent or delay wound healing, such as diabetes, hypertension or additional factors such as smoking were effective on delayed wound healing or lack of wound healing and the complaints of the patients.

Conclusion

We consider that phenol application in the treatment of pilonidal sinus is an appropriate treatment method due to its property

of simple implementation, the low cost in economic terms, low social costs, such as not to prevent the return of the patient's routine work and daily life, low duration of hospitalization or it can be performed as outpatient procedure, the results which are more acceptable in terms of aesthetic concerns and low recurrence and complication rates. In recent years, an increase in implementation of this method and publications in this direction in the literature are also support our findings. One of the most important features of our method is that the treatment can be done with minimally invasive method without the need for surgery for a disease requiring surgery. Thus, the patient is released from surgery.

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