



Treatment for Endoscopic Pilonidal Sinuses in Conjunction with the Application of Crystallized Phenol may Prevent Recurrence

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Abstract

A frequent condition of the natal cleft is the pilonidal sinus, can cause consequences of various issues including infection and development of an abscess. The purpose of this review paper is to investigate if endoscopic pilonidal sinus therapy in conjunction with application of crystallized phenol can prevent recurrence. There are several operative management alternatives, however the best method is still up for debate. There is currently no single treatment available for pilonidal diseases, which heals quickly and rarely returns. There is currently no one treatment for pilonidal illness that is quick to heal, produces pleasing aesthetic effects, and has a low recurrence rate. For the first time, this cohort combined the pilonidal illness treatments of phenol crystal application and diathermy ablation using an endoscope.

The use of endoscopic pilonidal sinus surgery in conjunction with crystallized phenol for the treatment of pilonidal disease: Its safety, efficacy, and short- and long-term results. Phenolization appears to have advantages over local sinus excision due to the fact that it is carried out under local anesthesia with a relatively short surgical procedure, less postoperative discomfort, a low risk of surgical site infection (8.7%), and a short recovery period (mean of 2.3 days) from normal activity.

Keywords: Phenol; Pilonidal disease; Sinus excision; Endoscopic; Abscess

Introduction

Herbert Mayo first identified the pilonidal sinus as a congenital abnormality in 1833. Richard Hodges first used the term pilonidal, which is derived from the Latin word “nest of hair”, in 1880. The diagnosis was made by locating a distinctive epithelial track [the sinus] in the skin of the natal cleft. The sickness was known as “jeep disease” during the second world war because it affected many jeep drivers. Additionally, a similar condition was found in the interdigital cleft of barbers, which were brought on by hair getting into damp, damaged skin.

Usually affecting the population of teenagers and young adults up until the third decade. Men present themselves on average at 21 years old whereas women at 19 years old. The frequency is also two to three times higher among men than its women. The condition known as sacrococcygeal Pilonidal Disease (PD), which primarily affects young individuals, is well-known [1]. Since the 19th century, there have been discussions about the need for a procedure with a quicker recovery period, better cosmetic outcomes, and a reduced recurrence rate [2]. Complex treatment methods might make this straightforward condition a persistent surgical mystery.

Recently, new techniques have been described that almost, but do not quite, meet these requirements for a better technique (Figure 1).

The pilonidal sinus plays a significant role in the fingers of barbers, dog groomers, and sheep shearers are reported. Additional risk factors include an active lifestyle, a family history, obesity, hirsute physique, local irritability, or trauma. Clogged hair follicles can cause pilosebaceous glands to swell and rupture, resulting in the development of abscesses or chronic sinus drainage.

Follicular hyperkeratosis, which causes a hair follicle’s infundibulum to become blocked, is regarded to be the main pathogenic event in these diseases. The follicle enlarges and bursts, causing secondary infection and the development of fistulae and abscesses.

As it is performed under local anesthesia with a relatively short surgical procedure, less

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postoperative pain, a low risk of SSI (8.7%), and only a short period of time (mean of 2.3 days) during which a patient cannot perform normal activities, excision of the pit of the sinus of SPSD with phenolization of the sinus tract appears to have advantages over the most common surgical treatment for SPSD, radical sinus excision. The increased incidence of recurrence (up to 33%) and the need for a second round of phenolization might be disadvantages. However, importantly, there are very few high-quality randomized controlled studies evaluating both therapy approaches. In order to remove and eliminate follicular hair and keratin debris, the pilonidal sinus and pilonidal fistula tracts are treated endoscopically. We demonstrate a single-center use of this novel method.

The goal is to describe the secondary pathways and anatomy of the pilonidal sinus. The fistuloscope is inserted into the open draining sinus, which is also opened to allow for future irrigation. The irrigation tube is opened so that the primary and minor tracts and sinuses of glycine may be seen. In this stage, gripping forceps are used to remove the hair tufts inside the tracts.

A number of phenol-treated patient groups with various long-term follow-up times. A recurrence incidence of >5% during a reasonably short follow-up time has also been documented for video-assisted, minimally invasive therapy of Parkinson's disease [3-10]. In order to promote more efficient clearing and wound healing within the sinus cavity, we coupled a phenol treatment with an endoscopic technique. Here, we present data on a cohort of 23 patients who had Endoscopic Pilonidal Sinus Therapy (EPSiT) together with application of crystallized phenol without any recurrence (Figure 2).

Treatment

- Incision and drainage.
- Infected:
 - oral- topical antibiotics.
 - acidic compounds.
- Surgery.
- Hair removal.
- Exfoliation.
- Low friction activities.

Methodology

Pilonidal sinus disease endoscopic treatment provides a minimally invasive substitute for conventional surgical techniques that may lessen morbidity [rate of diseases]. However, to confirm its efficacy in comparison to conventional surgical techniques, longer-term results data from more prospective randomized studies are required.

For camera insertion, one of the sinus pits was widened to a diameter of 3 mm to 4 mm. Through this enlarged pit, in the sinus tract, the fistuloscope was inserted. The sinus surface, debris, and granulation tissue were eliminated using diathermy while being seen clearly. A few phenol crystals were inserted into the tract to fill it in both the upper and lower directions once the ablation treatment was finished. The wound was wrapped with a tiny bandage.

Symptoms of patients with surgical pilonidal sinus disease and endoscopic pilonidal sinus disease were rated and evaluated. This treatment can be carried out under general anesthesia (for severe

sinus illness or at the patient's request) or local anesthesia (for simple sinuses). Depending on the surgeon's discretion, the patient is positioned in a lateral or prone position.

Endoscopic treatment

An electrode attached to the electrosurgical knife power unit, an endobrush, tongs, and a Volkmann spoon are included in the kit. The eyepiece of the fistuloscope has fitted with an irrigation channel, an operating channel and an optical channel that is 14 cm long and has a handle. The latter channel is linked to a 5000 ml bag that holds a glycine +1% mannitol solution (Figure 3) [11].

It is invasive surgery using a tiny camera to explore the sinus. The internal lining of sinus is safely burnt and cleaned with a brush. Some people need more than once endoscopic pilonidal sinus treatment for complete healing of sinus. The procedure is performed under local anesthesia in patients. The wounds are quite small and don't need insertion. The people have less pain after the procedure (Figure 4) [12].

The patients were encouraged to move around as soon as possible after surgery. Patient were told to irrigate the cavity twice a day with 5 ml saline solution after being discharged in order to maintain the area dry and clean.

Crystallized phenol application

The crystallized phenol application has several advantages such as being a minimally invasive procedure performed under local anesthesia with higher success rate after multiple application.

This method is typically used after all hair and debris have been removed or curetted from the sinus, and it helps to eliminate granulation tissue and further debris formation (Figure 5).

Result

Operation time were between 15 min to 35 min. There were no intraoperative or postoperative complications.

The endoscopic pilonidal treatment has no complications. The crystallized phenol treatment is a simple and inexpensive method and has been recommended as first line treatment for any type of pilonidal sinus. Phenol has a destroying the epithelium and debris in the sinus and thereby able to promote healing of the sinus.

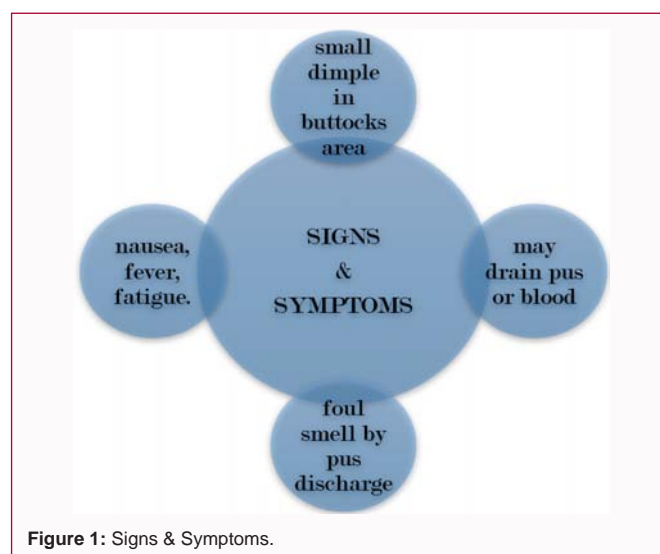


Figure 1: Signs & Symptoms.



Figure 2: Causes.

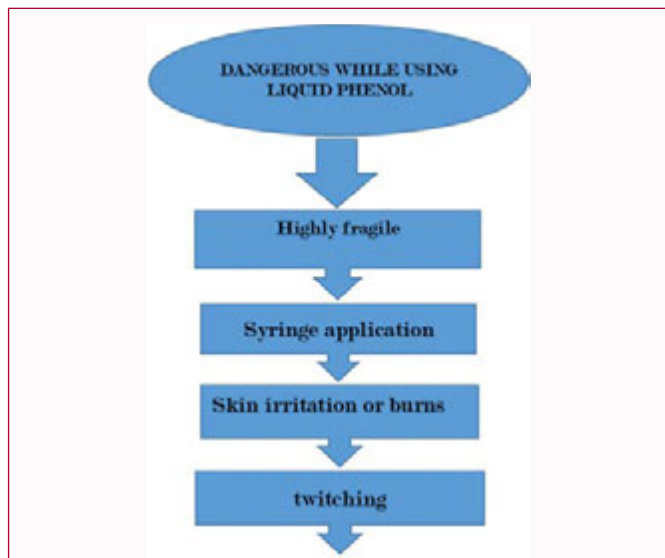


Figure 5: Crystallized phenol application.

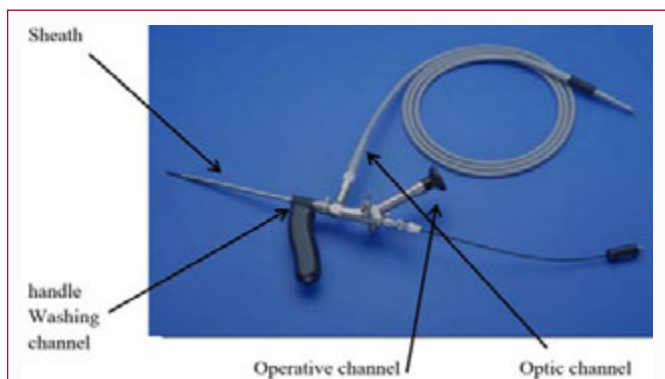


Figure 3: Endoscopic treatment.

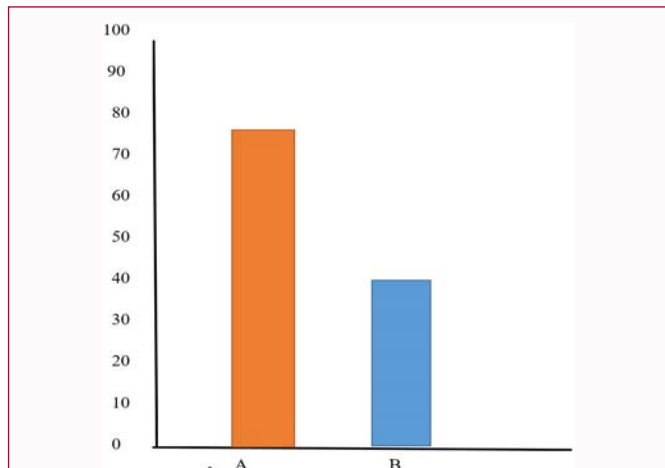


Figure 6: Comparison recurrence from surgery treatment and endoscopic treatment.

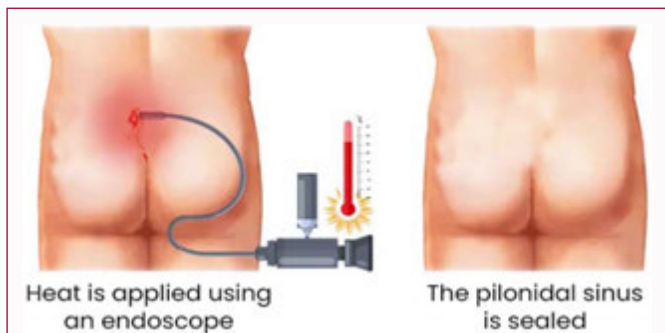


Figure 4: Invasive surgery.

Discussion

Patients in the phenolization application after endoscopic treatment reported much less discomfort during the first two weeks. The wound epithelialization happened significantly more quickly.

The present study is the first to report on the safety, effectiveness, and short and long term out comes for a combined endoscopic treatment and crystallized phenol treatment for pilonidal sinus. The short-term recovery and lack of recurrence over an average follow up period of 22 months (Figure 6).

The bar graph represents comparison recurrence from surgery treatment and endoscopic treatment.

A-represents recurrence from the surgery treatment {80% results in SPST}.

B-represents recurrence from endoscopic pilonidal sinus treatment with crystallized phenol application {40% results in EPST} [13].

The bar graph shows that the endoscopic pilonidal sinus treatment has low recurrence than in a surgery pilonidal sinus treatment.

Conclusion

Crystallized phenol treatment combined with endoscopic pilonidal sinus treatment was safe, tolerable, and achieved fast and durable healing with no recurrence over an average of 22 months.

Combining these methods by exposing the sinus lining under direct vision offers a better cleanup of the hair and debris. The addition of phenol crystals provides faster and more durable healing with no recurrence for greater than or equal to 2 years.

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