



International Journal of Surgery Science

E-ISSN: 2616-3470

P-ISSN: 2616-3462

© Surgery Science

www.surgeryscience.com

2020; 4(3): 345-347

Received: 12-05-2020

Accepted: 18-08-2020

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Determine the effect of crystallized phenol in management of sacrococcygeal pilonidal sinus

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DOI: <https://doi.org/10.33545/surgery.2020.v4.i3f.518>

Abstract

Background: The present study was conducted to determine the effect of crystallized phenol in sacrococcygeal pilonidal sinus cases.

Materials & Methods: The present study was conducted in the department of general surgery on 18 patients. The nature of disease, number of sinus openings and phenol application was assessed.

Results: out of 24 patients, age group 20-40 years had 4 males and 2 females, age 40-60 years had 5 males and 3 females and group >60 years had 5 males and 5 females. 7 lesions were acute and 17 were chronic. The position of orifice was midline in 13 cases and lateral in 6 cases. The difference was non-significant ($P > 0.05$). Nine patients had 1 application, three had 2, two had 3, four had 4, two had 5, one had 6, two had seven and one had 8 applications. The difference was significant ($P < 0.05$).

Conclusion: Author concluded that 7 lesions were acute and 17 were chronic. Crystallized phenol can be effectively used for treatment of pilonidal disease.

Keywords: acute, phenol, pilonidal cysts

Introduction

Pilonidal sinus disease is a common problem, but its management is frequently unsatisfactory^[1]. According to Monro and McDermott, the factors responsible for the development of pilonidal sinus would appear to be the deep natal cleft together with, in most patients, the presence of numerous hair surrounding it, with their points noticeably directed towards its depth^[2]. Multiple case reports described pilonidal cyst formation in jeep drivers in World War II^[3]. So many servicemen were affected with pilonidal disease that it was renamed "jeep disease." Pilonidal disease is a type of skin infection which typically occurs between the cheeks of the buttocks and often at the upper end. The estimated incidence is 26 per 100,000 people. Risk factors include obesity, family history, prolonged sitting, greater amounts of hair, and not enough exercise^[4].

Pilonidal cysts are itchy and are often very painful, and typically occur between the ages of 15 and 35. Although usually found near the coccyx, the condition can also affect the navel, armpit or genital region, though these locations are much rarer^[5]. Recently, Phenol treatment has been found effective in management of pilonidal disease. The present study was conducted to determine the effect of crystallized phenol in sacrococcygeal pilonidal sinus cases.

Materials & Methods

The present study was conducted among 24 patients in the department of general surgery. All were informed regarding the study and written consent was obtained. Ethical approval for the study was obtained.

General information such as name, age, gender, etc. was recorded. A careful clinical examination was done. The number of sinus openings was assessed. The skin and sacrococcygeal fascia along with the surrounding tissue of the main sinus and its lateral tracts were infiltrated with approximately 5 ml lidocaine with epinephrine. The phenol application was made concurrently with the abscess drainage for the treatment of the acute disease. The phenol was left in situ for approximately 2 min and then expressed by pressure. Closure of the orifices was accepted as a complete cure. Results were tabulated and subjected to statistical analysis. P value < 0.05 was considered significant.

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Results

Table 1: Distribution of patients

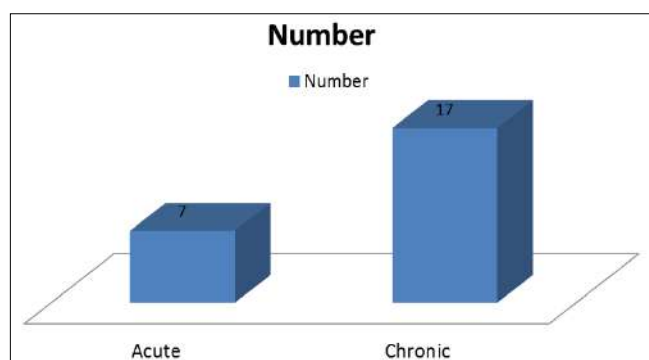
Total - 24		
Age group (years)	Male	Female
20-40	4	2
40-60	5	3
>60	5	5
Total	14	10

Table I shows that out of 24 patients, age group 20-40 years had 4 males and 2 females, age 40-60 years had 5 males and 3 females and group >60 years had 5 males and 5 females.

Table 2: Nature of disease

Acute	Chronic	P value
7	17	0.01

Table II shows that 7 lesions were acute and 17 were chronic. The difference was significant ($P < 0.05$).

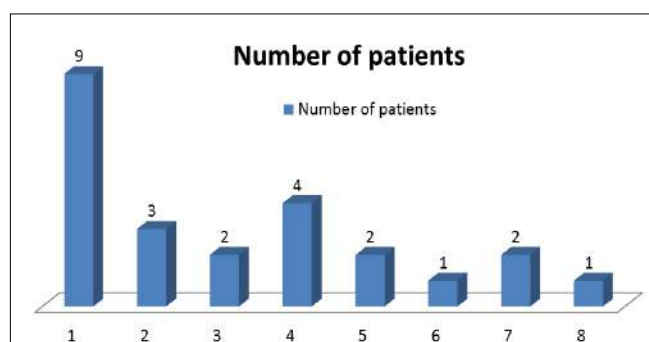


Graph 1: Nature of disease

Table 3: Position of orifice

Position	Number	P value
Midline	13	0.92
lateral	11	

Table II shows that position of orifice was midline in 13 cases and lateral in 6 cases. The difference was non-significant ($P > 0.05$).



Graph 2: Phenol applications

Table II shows that nine patients had 1 application, three had 2, two had 3, four had 4, two had 5, one had 6, two had seven and one had 8 applications. The difference was significant ($P < 0.05$).

Discussion

Obesity is an independent risk factor of disease and is associated with postoperative complication and recurrence^[6]. Regardless of BMI, sacrococcygeal subcutaneous fat thickness is associated with pilonidal disease. Growing hair is the most common cause of pilonidal disease and one of the factors that contribute to in growing hair was the depth and narrowness of natal cleft. The underlying mechanism is believed to involve a mechanical process^[7]. The lesions may contains hair and skin debris. Symptoms may include pain, swelling, and redness. There may also be drainage of fluid. It rarely results in a fever. The spectrum of pilonidal disease presentation varies from a chronically inflamed area and/or sinus with persistent drainage to the more acute presentation of an associated abscess or extensive subcutaneous tracts^[8].

Diagnosis is based on symptoms and examination. If there is infection, treatment is generally by incision and drainage just off the midline. The management of pilonidal sinus disease is frequently unsatisfactory. Many surgical and nonsurgical treatment modalities have been suggested, but an ideal and widely accepted treatment has yet to be found^[9].

In present study, out of 24 patients, age group 20-40 years had 4 males and 2 females, age 40-60 years had 5 males and 3 females and group >60 years had 5 males and 5 females. Kaymakcioglu *et al.*^[10] studied 143 patients with sinus pilonidalis treated with 80 % phenol. They were followed up for a 24-month period, and a recurrence rate of 8.3 % (12 of 143 patients) was found. They studied 25 patients with sinus pilonidalis treated with the Limberg technique. They were followed up for a 20-month time frame, and a recurrence rate of 4 % (1 of 25 patients) was found. We found that 7 lesions were acute and 17 were chronic. The position of orifice was midline in 13 cases and lateral in 6 cases. Rao *et al.*^[11] assessed the role of Z-plasty in promoting primary healing in pilonidal disease and to evaluate morbidity and recurrence. This study included 40 patients (36 males and 4 females) who underwent excision of sinus and Z-plasty closure for sacrococcygeal pilonidal sinus. The follow-up period ranged from 6 to 12 months. There were 36 males and 4 females with a median age of 25 years. The mean hospital stay was 2 days. The mean time to return to work after discharge from the hospital was 14 days. There were no recurrences, and all patients were satisfied with the cosmesis. Two patients (5 %) had numbness over the flap. Necrosis of flaps did not occur in any patient. Only three patients were noticed to have wound infection (7.5 %). Five patients (12.5 %) developed wound seroma. Although requiring some technical expertise, excision of sinus and Z-plasty offer superior results with respect to recurrence in the hospital stay and cosmesis of patients with pilonidal sinus.

Pilonidal disease has been studied for a long time, and its causes are unknown. Some authors have suggested that the pilonidal cyst is a congenital disease corresponding to remnants of the medullary canal. The present study was conducted to assess the role of crystallized phenol application in management of sacrococcygeal pilonidal sinus^[9]. The surgical procedure for pilonidal sinus disease is most often carried out under general or spinal anesthesia, with some cases occurring under local anesthesia. In this study, patients underwent the procedure under local anesthesia in the outpatient clinic, and the treatment was well tolerated by all patients^[12]. The ability to apply the phenol application under local anesthesia is another important advantage of this procedure.

Conclusion

Author concluded that 7 lesions were acute and 17 were chronic. Crystallized phenol can be effectively used for treatment of pilonidal disease.

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