

Pilonidal Sinus Disease: A 5-year Study

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Citation

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Abstract

Background: Even though there are different surgical treatments for pilonidal sinus, the outcome may not be uniformly satisfactory. Recurrent disease is a significant cause of morbidity and loss of workdays and has to be prevented.

Materials and methods: One hundred and ten patients were admitted with pilonidal sinus disease over a period of five years in my unit and were managed by different surgical approaches. The profile of these patients and the modalities of management are analyzed and presented.

Results: Forty-two patients were operated by excision and primary closure; 40 by excision and plastic reconstruction (37 with rhomboid flap and 3 with Z-plasty); 17 by incision and drainage and 11 were excised and left open. Recurrence occurred in 14 patients.

Conclusions: Plastic reconstruction with rhomboid flap or Z-plasty proved to be a better method to avoid recurrence compared to other options but the use of this may be precluded by infection in some cases.

INTRODUCTION

Pilonidal sinus is a hair-containing sinus at the cleft of the buttocks. Although Herbert Mayo in 1833 described a cyst that contained hair just below the coccyx¹, the term pilonidal sinus was coined by Hodge in 1880.² The term pilonidal sinus disease would be more appropriate as the clinical presentation consists of a spectrum of entities ranging from asymptomatic hair-containing cysts and sinuses to a large abscess in the sacrococcygeal area.

There were controversies about the etiology and management of pilonidal sinus. The congenital theory of origin of pilonidal sinus was considered in the past but abandoned later. The increased occurrence in jeep drivers during world war II earned it the name "Jeep Disease". Karydakos suggests three main factors interacting to produce the disease, namely hair, force and vulnerability.³

In the U.S., pilonidal sinus disease affects approximately 26 per 100,000 people.⁴ The onset of pilonidal sinus disease is rare both before puberty and after the age of 40. Males are more affected than females (3 or 4:1).⁴ The average age of presentation is 21 years for men and 19 years for women.⁴ The risk factors and associations include sedentary occupation, positive family history, obesity and local irritation and trauma.⁵ Hormones, hair, friction and infection

all play a role in the pathogenesis of the disease.⁶

MATERIALS AND METHODS

One hundred and ten patients were admitted over a period of five years with pilonidal sinus disease and treated. Ninety-eight were males and 12 females. The age was between 15 and 32. Detailed history was taken including family history and risk factors. BMI was measured for all. Thorough clinical examination was done to exclude other conditions that resemble pilonidal sinus. Out of 110 patients, 93 patients presented with pilonidal sinus (11 were infected). 17 patients had pilonidal abscess (two had multiple abscesses). Routine CBC and chemistry were done for all. Sinogram was done for only one patient. Culture and sensitivity was done in all infected cases.

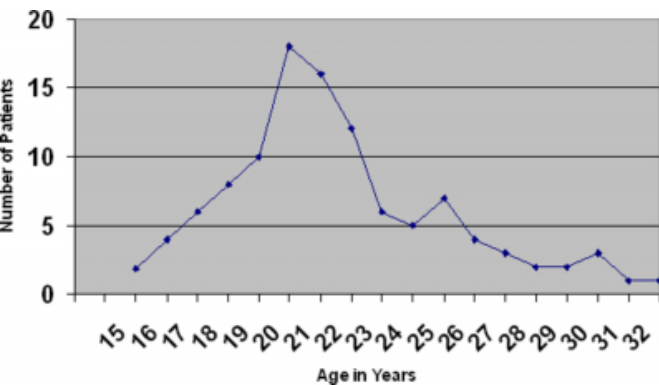
All patients were treated surgically. Infections were treated with appropriate antibiotics. Forty-two patients were operated with excision and primary closure; 40 by excision and plastic reconstruction (37 with rhomboid flap, 3 with Z-plasty); 17 patients underwent incision and drainage; in 11 patients the sinus was excised and left open to heal (all infected cases). All patients were followed up in out-patient clinic one week and later after discharge up to a period of two years.

RESULTS

The age of the patients varied from 15 to 32 years with an average of 22 years. The maximum incidence was between the ages of 15 and 25 and the incidence decreased thereafter. The age distribution is shown in Figure 1.

Figure 1

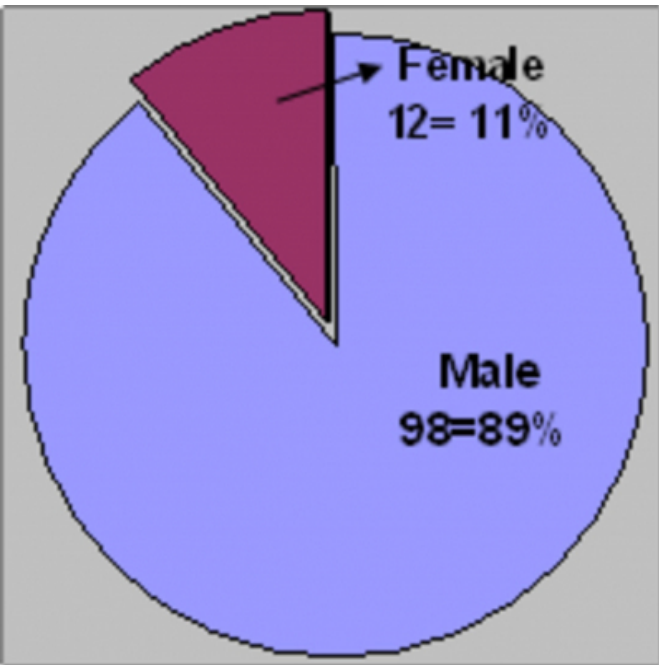
Figure 1: Age distribution of patients with pilonidal sinus disease



Ninety-eight patients (89%) were males and 12 females (11%). The male to female ratio was 10:1 with significant male preponderance. The sex distribution of patients is shown in Figure 2.

Figure 2

Figure 2: Sex Distribution of Patients with PNS disease



Among the male patients, 71 had BMI > 30 and 27 had BMI >25 but < 30. Among the 12 females, 8 were obese (BMI > 30) and 4 were overweight (BMI > 25 but < 30). The details

of surgical methods used in the treatment are shown in Table 1 and Figure 3.

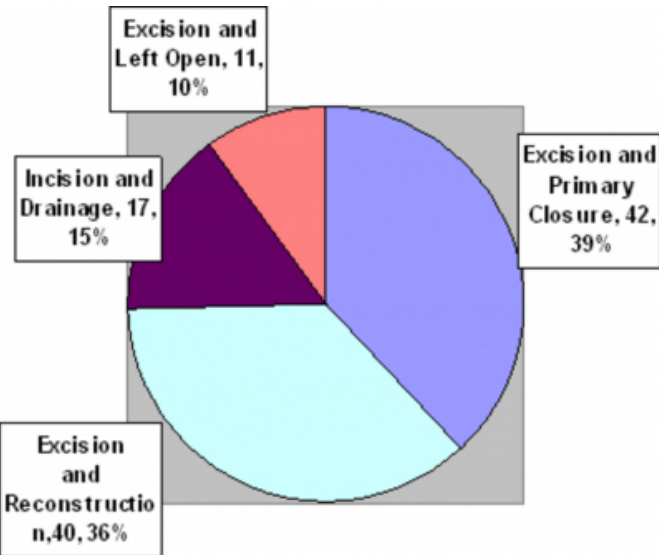
Figure 3

Table 1: Details of surgical treatment of PNS disease

	Surgical Methods	Number	Percentage
1	Excision and Primary Closure	42	38.2
2	Excision and Reconstruction (Rhomboid flap + Z-Plasty)	40	36.4
3	Incision and Drainage	17	15.4
4	Excision and left open	11	10.0
	Total Number of Patients	110	100

Figure 4

Figure 3: Surgical Methods of Treatment of PNS Disease



Recurrence occurred in 14 patients (12.7%), 10 cases after incision and drainage of pilonidal abscess and 4 following excision and suture.

DISCUSSION

Pilonidal sinus is not a new disease entity but the management still needs a lot of attention, to prevent recurrence, which is a disturbing complication requiring frequent hospital admissions and loss of work days. In this series the majority of patients were males (M:F=8:1). The peak age was 22 years and these data compare with other series. Obesity and overweight were risk factors; 79 out of 110 patients were obese (72%) and the remaining 28% overweight. The modality of surgical management was chosen according to the clinical features of the individual patient. Excision and primary closure is cosmetically more

acceptable for some patients and is associated with a shorter healing time and time off work.⁶ However, this potential benefit is offset by the need for bed rest for up to one week in hospital,⁷ coupled with a high risk of post-operative infection.⁸ Excision with rhomboid flap and Z-plasty flap require general anesthesia and a week or more bed rest in hospital. Abscesses are dealt with by incision and drainage. Some sinuses may be excised and left open to heal.

On review of the literature, it is seen that recurrence rates may range from 20% to 40% and sometimes more.⁴ In this series, the recurrence rate was much lower; 14 out of 110 patients (12.7%). Eight patients had recurrence following excision and drainage and three after excision and suture. Out of the 40 patients operated with excision and reconstruction (37 with rhomboid flap and 3 with Z-plasty) none had recurrence.

CONCLUSION

Although different surgical options are available for the treatment of pilonidal sinus disease, none of them provides a

full guarantee against recurrence. Excision with plastic reconstruction with rhomboid flap or Z-plasty seems to be the best option to prevent recurrence.

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