

**Research Article****Management of Pilonidal Disease in a District General Hospital: Our Experience and Review of the Literature****Sanjay Dalmia\*, Debashish Sarkar, Sam Sangal**

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**Abstract:** Our study was a retrospective analysis of pilonidal disease management in Stafford Hospital, a District General Hospital. We analyzed 80 patients which included 44 men and 36 women who presented with pilonidal disease (sinus and abscess) either electively or in emergency. We reviewed their presentation, treatment received, hospital stay and outcome. Out of these 80 patients, 51% presented as emergency. Thirty seven patients presented with pilonidal sinus (PS) and remaining forty three with pilonidal abscess (PA). Out of 37 patients that presented with sinus, 23 patients were presented for the first time and 14 presented with recurrent sinus. In 17 out of 37 of these patients, primary closure was performed. 7 of these 17 patients developed post operative infection or discharge. Of those presenting with PA, 11 were recurrent abscesses. All these were treated with incision and drainage except three. These three had minimal infection and therefore primary closure was attempted. Two of these healed satisfactorily while the third patient did not attend for follow up. The study has shown that most patients presenting with PA were satisfactorily treated with procedure of incision and drainage. In patients with PS, laying open and primary closure had a high incidence of wound infection (42%) in our series.

**Keywords:** Pilonidal, Sinus, Abscess, Management, Drainage.

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**INTRODUCTION**

Pilonidal disease is a common condition, particularly in young adults. It has an incidence of 26 cases per hundred thousand of population each year. Young males suffer from pilonidal disease more than females. It arises from hair follicles occurring mainly in sacrococcygeal region and less commonly in umbilicus, axilla etc. The acute phase is characterized by presence of an abscess whereas the chronic phase presents with intermittently discharging sinus. It can be associated with significant morbidity and prolonged wound healing after definitive surgery. This study reviews different modes of presentations of this challenging surgical problem and the numerous non operative and operative treatment options currently available for it.

**METHODOLOGY**

We performed retrospective study of 80 adult patients that presented in our hospital in a two year period from 1<sup>st</sup> January 2011 to 31<sup>st</sup> December 2012 with pilonidal sinus and abscess (PS and PA). A literature search using the PUBMED was performed using keywords. Relevant articles were found on presentation and management of pilonidal disease.

**RESULTS**

We evaluated 80 patients that were treated for pilonidal disease. All of these were located in sacrococcygeal region. Out of these 41 (51%) presented as emergency and 39 (49%) had elective presentation. Twenty one percent of these patients had previous co morbidities and commonest of these was asthma. Forty four of these patients were treated as inpatient and 36 as day case. Thirty seven (46.5%) patients presented with pilonidal sinus. Of these, 23 patients presented for the first time and 14 had recurrent pilonidal sinus. In 17 of these 37 patients primary closure was performed. Seven of these 17 patients developed post operative infection or discharge. 43 presented with pilonidal abscess and 11 of these had recurrent abscess (Table 1). All these patients were treated with incision and drainage except three where infection was minimal and closure was attempted. In two of these patients wound healed satisfactorily and third patient did not attend for follow up. Out of all the 80 patients, 11 were discharged without follow up and those who were followed, meantime for follow up was 5 weeks (2-12).

**Table 1: Diagnosis**

Diagnosis	Number of patients	Percentage %
Pilonidal Abscess	32	40%
Recurrent Pilonidal Abscess	11	13.5%
Pilonidal Sinus	23	29%
Recurrent Pilonidal Sinus	14	17.5%

## DISCUSSION

The choice of adequate method of wound closure after excision of pilonidal sinus is a debatable issue among surgeons. A review looking at the different surgical techniques available suggest that incision and drainage, simple excision, curettage, partial lateral wall excision, or marsupialisation, are simple techniques with good results. They can be used for the initial surgery but their use is not recommended for recurrent disease. A systematic review and meta-analysis looking at 18 randomised trials with a total of 1573 patients was done. Twelve of these trials compared open healing with primary closure. Time to healing was quicker after primary closure. Rates of surgical site infection did not differ; recurrence was less likely to occur after open healing (relative risk 0.42). Six trials compared surgical closure methods in form of midline v off-midline closure. They showed that wounds took longer to heal after midline closure than after off-midline closure with a mean difference of 5.4 days. Rate of infection and risk of recurrence were also higher with a relative risk of 4.70 and 4.95 respectively. They recommended that off-midline closure should become standard management for pilonidal sinus when closure is the desired surgical option [1].

A further recent update on this trial added 8 more randomised trials and taking number of patients to 2530. Their conclusion was same as above, recommending off midline closure, where closure is deemed appropriate [2].

A recent systematic review studying effect of drains on postoperative infection and recurrence showed that postoperative infection rate was lower in patients with drainage of the wound with a odds ratio of 0.71. Recurrence after surgery was also lower in drainage group with an odds ratio of 0.80. They went on to say further that despite these differences overall outcome was no better [3].

Thompson showed that patients with minimal symptoms and those having drainage of a single acute abscess can be treated expectantly. He suggested that simple removal of midline skin pits with lateral drainage of the abscess and sinus is effective in most instances. These procedures are usually done as a day case requiring minimal care in the community and are associated with a rapid return to work [4]. Another study showed that limited excision for PS can be done in a day case setting with a low recurrence rate and short time off work [5].

A study from Germany has recommended pit picking procedure which involves removal of all midline pits by excising a margin of skin of less than 1 mm. It showed that 74% had no recurrence after a median follow-up time of 30 months and 8 more patients (5 %) remained asymptomatic after a second "pit picking" procedure and therefore can be effective in three quarter of patients. By multivariate analysis, smoking (hazard ratio 2.1) and occurrence of an abscess during the course of disease (HR 2.7) were statistically significantly associated with the disease recurrence after "pit picking" surgery [6].

Another study that compared patient satisfaction from surgery and return to work found a significant correlation between patient satisfaction and return to work ( $p < 0.01$ ), both correlated equally strongly with duration between first diagnosis and surgery ( $p < 0.01$ ). Satisfaction correlated with gender ( $p < 0.01$ ), smoking cessation ( $p < 0.05$ ) and quantity of painkiller intake ( $p < 0.01$ ) [7].

Karyadakis described primary closure leaving a lateral wound. This had a recurrence of less than 1% [8]. These have not been reproduced by others. Bascom described excision of pit with a healing in 3 weeks and a recurrence of 16% [9]. Gwynn described rhomboid flap with a long hospital stay of 11 days and recurrence of 5% but number was small [10]. The modified rhomboid flap for recurrent disease has consistently shown positive results in terms of complication rates and recurrence [11].

Onder *et al.* showed that Limberg flap method ( $p = 0.039$ ), family tendency ( $p = 0.011$ ), sinus number ( $p = 0.005$ ), cavity diameter ( $p = 0.002$ ), and primary closure ( $p = 0.001$ ) were found to be risk factors for complications and recurrence [12]. An emerging treatment option for complex or recurrent pilonidal disease is negative pressure wound therapy, but it needs more rigorous research, including randomized controlled trials before implications can be drawn for evidence-based practice [13].

## CONCLUSION

Surgical treatment of pilonidal sinus is variable from simple excision with or without closure. Pilonidal abscess is mostly treated with incision and drainage with satisfactory results. In patients with PS, laying open and primary closure had a high incidence of postoperative wound infection (42%). In either case, incidence of both wound infection and morbidity was

high as reported in literature earlier. We could not comment on recurrence due to short follow up.

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