

ORIGINAL ARTICLE

Outcomes of Redivac Drain in Primary Closure of Pilonidal Sinus

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ABSTRACT

Aim: To determine the effectiveness of redivac drain in primary closure of pilonidal sinus.**Study Design:** Comparative study**Place and Duration of Study:** Department of Surgery Unit-1, Sandeman Provincial Hospital Quetta from 1st January 2020 to 31st December 2020.**Methods:** Ninety patients of both genders were presented in this study. Patient's details demographics age, sex and BMI were recorded after taking written consent. Patients were divided into two groups; group I and group II. Group I had 45 patients and underwent for redivac drain and group II was without redivac drain and had 45 patients. Complete follow up was done in duration of 6 months. Outcomes wound healing, infection of wound and recurrence of pilonidal sinus in both groups were observed.**Results:** Majority of the patients 66 (73.33%) were males and 24 (26.67%) were females. Mean age of the patients in group I was 28.52±6.88 years with mean BMI 24.16±7.33 kg/m² and in group II mean age was 29.68±7.45 years with mean BMI 25.14±3.16 kg/m². In group I 36 (80%) cases showed complete healing, partially healing was observed among 7 (15.55%) and 2 (4.44%) showed non-recurrence and in group II complete healing was among 26 (57.8%) patients, partially healing was found in 14 (31.11%) and non recurrence was among 5 (11.11%) patients. Rate of recurrence in group I was 3 (6.67%) less than that of group II (8.9%).**Conclusion:** The redivac was more effective as compared to primary closure of pilonidal sinus without redivac.**Keywords:** Redivac drain, Primary closure, Pilonidal sinus, Recurrence

INTRODUCTION

Pilonidal sinus (PNS) is a chronic infection-associated inflammatory disorder and can induce anxiety, confusion and lack of productivity. In 1880 Hodges had originally described it.¹ It is mainly present in the sacrococcygeal area's natal spill and is manifested as inflammation, pus discharge and the creation of sinuses.^{2,3} Males are more affected than females by this disease because of their more hairy nature than females.⁴ Although the advancement of medical research and study has not yet been clearly defined, the approach for controlling pilonidal sinus disease. The therapy scheme must, however, perfectly diminish the discomfort, give a shorter stay in the hospital, prevent problems, and lower the rate of recurrence.⁵

Even though the accuracy of pilonidal disease and aetiology is not apparent, there seems to be a vital role for the hair and the granulation tissue in its presence. It is hypothesized that the intra-hair movement is induced by the suction whilst sitting at the middle line. This high rate develops up and could lead to infection and occur in the sacrococcygeal region as an acute abscess. The recurrence of the wound is extremely usual once the acute stage is eliminated.⁵

This condition occurs largely among persons who are hairy, and those who work in the workplace frequently suffer. So the driver's sickness is named. Infections, traumas and hair in the deep tissues of the coccyx region are the main causes of pilonid sinus. This condition is experienced most of the time during adolescence, when hair growth and sebaceous glands activity are high.⁷

Pilonidal sinus mostly affects the young people of society and disrupts their ordinary lives for one of the key causes. Even the simplest actions in their lives are tough for those suffering with this disease. This disease is one of the most prominent factors that hinder the young to go to work because of its high rate of recurrence and the length of time required to treat the operating site.⁸ In relation to the pathophysiology of this illness, the acquired theory has been proposed two ideas which regard it as congenital or acquired.⁹

A number of pillonidal procedures, generally in 2 types, have been proposed: open-layer and primary repair. One of the retrogrades of the primary technique of repair is the establishment of a dead wound region that can lead to the accumulation of blood and seroma.¹⁰ Considering that primary-closure excision remains a common method for the treatment of pilonidal sinus¹¹, it is necessary to determine the optimal way for this condition to minimize the risk of morbidity in the patients afflicted.

The purpose of this study was therefore to analyze the results of primary pilonidal sinus closure and compare them with or without redivac drain implantation.

MATERIALS AND METHODS

This prospective study was carried out at Department of Surgery Unit-1, Sandeman Provincial Hospital Quetta from 1st January 2020 to 31st December 2020 after approval from Ethical Committee. This study comprised of 90 patients. Patient's details demographics were recorded after taking written consent. Patients had acute sinuses, recurrent sinuses and those did not give any written consent were excluded from this study. Patient's details demographics age, sex and BMI were recorded after taking written consent. Patients were divided into 2-groups, I and

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II. Groups I had 45 patients and underwent for redivac drain and group II was without redivac drain and had 45 patients. The patients in both groups were administered spinal anaesthetic and allowed to take a position of prone. The diseased area was initially treated with pyodine and draped using the aseptic measurements. In order to investigate the depth of the sinus, the sample was inserted from the outside orifice of the sinus following the operation. In addition, it was supplied and intensified up to the sacrococcygeal fascia in the elliptical incision to assure the excision of the whole sinus area. However, if any secondary tract was present, the area was re-examined and thorough excision followed. We then obtained haemostasis with the use of forceps and diathermy. Complete follow up was done in duration of 8 weeks. Outcomes wound healing, recurrence and rate of satisfaction was observed in this study. Complete data was analyzed by SPSS-24.

RESULTS

Majority of the patients 66(73.33%) were males and 24(26.67%) were females among 33(73.33%) males and 12(26.67%) females were present in group I same frequency was in group II. Mean age of the patients in group I was 28.52 ± 6.88 years with mean BMI 24.16 ± 7.33 kg/m² and in group II mean age was 29.68 ± 7.45 years with mean BMI 25.14 ± 3.16 kg/m² (Table 1).

In group I, 36(80%) cases showed complete healing, partially healing was observed among 7(15.56%) and 2(4.44%) showed non-healing and in group II complete healing was among 26(57.8%) patients, partially healing was found in 14(31.11%) and non-healing was among 5 (11.11%) patients (Table 2).

Rate of recurrence in group I was 3(6.67%) less than that of group II (8.9%). Frequency of satisfaction was higher in redivac drain group as compared to group II (Table 3).

Table 1: Demographics of enrolled cases (n=90)

Variables	Group I	Group II
Mean age (years)	28.52 ± 6.88	29.68 ± 7.45
Mean BMI (kg/m ²)	24.16 ± 7.33	25.14 ± 3.16
Gender		
Male	33 (73.33%)	33 (73.33%)
Female	12 (26.67%)	12 (26.67%)

Table 2: Comparison of wound healing among both groups

Wound healing	Group I	Group II
Complete	36 (80%)	26 (57.8%)
Partially	7 (15.56%)	14 (31.11%)
Non	2 (4.44%)	5 (11.11%)

Table 3: Comparison of outcomes recurrence and satisfaction rate among both groups

Variable	Group I	Group II
Recurrence		
Yes	3 (6.67%)	4 (8.9%)
No	42 (93.33%)	41 (91.1%)
Satisfaction		
Yes	41 (91.11%)	34 (75.55%)
No	4 (8.89%)	11 (24.45%)

DISCUSSION

Recent study, Silva¹² has shown pilonidal sinus to be a disease acquired. It is needed because of deep splintering in dead hair, due to buttock friction and poor cleanliness that promotes dirt and hair build-up within the splinter. In his study, Karydakos used asymmetric excision and primary closure to prevent hair collection in the natal split.¹³

In present study total 90 patients were resented and majority of the patients, 66 (73.33%) were males and 24 (26.67%) patients were females. We arranged to divide patients into two equal groups. Group I received redivac drain and group II was without redivac drain. Mean age of the patients in group I was 28.52 ± 6.88 years with mean BMI 24.16 ± 7.33 kg/m² and in group II mean age was 29.68 ± 7.45 years with mean BMI 25.14 ± 3.16 kg/m². Our findings are comparable to the previous some studies.^{14,15} Earlier wound healing (comprehensive epithelialization) is connected with a primary closure and faster return to day job, although a delayed closure (open) is related with lower chance of a recurrence of pilonidal disease.^{16,17} In our study redivac group showed complete healing among 80%, partially healing among 15.56% and non-healing was only among 2 (4.44%) patents and in group II complete healing was among 26 (57.8%) patients, partially healing was found in 14 (31.11%) and non-healing was among 5 (11.11%) patients. Moreover, the primary closure approach is more trustworthy in order to produce good results like early wound cure when compared with numerous other techniques.¹⁷ The perfect and ideal operation offers lower stays or hospitality, lower costs, quick recovery of the wound, and a greater rate of healing of the wound. Williams¹⁸ analyzed the various operations for pilonidal sinuses in his study and indicated a curative period of 10-15 days for primary closed excision. The report was published in the 18th century.

Another trial showed good results for redivac drain in 31 patients with pilonidal sinus with a view to excision and primary closure. Rapid healing is the main emphasis of primary closure and can be achieved by infection prevention and pus generation, according to his studies. In addition, he proposed the use of high vaccine redivac drain in order to avoid these consequences.¹⁹ Hull and Wu²⁰ compared excision and open granulation with the main shut-off and observed a primary healing fault rate of 9% after primary shutdown.

Rate of recurrence in group I was 3 (6.67%) less than that of group II (8.9%). Frequency of satisfaction was higher in redivac drain group as compared to group II. Our these findings were comparable to the previous some studies in which recurrence rate was between 4%-18%.^{20,21} In some other research it is still controversial to employ the suction drains after primary closure excision. Serour et al²² advocated routine usage with primary closure of the suction drainage, whereas Tritapepe and Di Padova²³ employed the drin as the antiseptic solution to flush the remaining cavity. Erdem et al²⁴ could not find any more benefits from drainage use, however. One of the studies revealed superiority to the other with regard to successful wound healing, less recursion and complication rates of the excision and primary closing approach. The study showed

satisfactory findings with a 95% wound-healing ratio for excision and primary closure.²⁵

The results show that people with redivac drain are very satisfied compared to those without redivac drain with low levels of satisfaction. This shows a statistically significant difference in satisfaction levels in both groups after surgery.

CONCLUSION

Redivac drain was effective and useful treatment in primary closure of pilonidal sinus, maximum healing of wounds with minimum recurrence was found because of redivac drain is effective and satisfaction rate among patients was also high.

Conflict of interest: Nil

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