

# Excision without Primary Closure Treatment of Pilonidal Sinus and its Gender Incidence.

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## ABSTRACT

**Background:** This study deal with the Excision without primary closure treatment of Pilonidal Sinus and it's gender incidence. It might play an important role during treatment of Pilonidal sinus. **Methods:** This study was done in the Department of Surgery, Government medical college Ambikapur and Mahamaya Hospital Ambikapur, C.G. India. This study was done on 25 Pilonidal sinus patients and entire patient underwent Excision without primary closure procedure under the general or spinal anaesthesia and antibiotic were administered intravenously. The data was displayed in tabulated form. **Results:** The present study was done on 25 Pilonidal sinus patients, which include 24 [96%] male and 01 [4%] Female. Incidence of male Pilonidal sinus disease is more compare to female i.e. 24:1 out of which maximum number of male patients i.e. 15[60%] showed in age group of 16-25year followed by 26-35year i.e. 08 [32%] and minimum number of patients exhibited in age group 36-45year i.e.01 [4%] .female pilonidal sinus patients 01 [4%] exhibited in age group 26-35 year . In this study primary pilonidal sinus disease i.e. 12 patients cure between 15-21 days followed by of 06 patients 07-14 days, 05 patients 22-28 days and 02 patients cure between 29-35 days. There were no Recurrent Pilonidal sinus patients studied and 1 patient have a post-operative complication respectively. **Conclusion:** The present study revealed that Excision without primary closure Treatment of Pilonidal Sinus is a simple procedure having minimum recurrence rate, short healing time, short or no hospital stay and rate of complication is low. Hence, this studies useful for Clinicians, Surgeon for proper clinical diagnosis and treatment of disease.

**Keywords:** Pilonidal Sinus, Excision without Primary Closure, Gender Incidence, Natal Cleft.

## INTRODUCTION

Pilonidal sinus disease is a generally occur in the natal cleft between the buttocks and often at the upper end i.e. sacrococcygeal area. It is a type of acquired abnormality of skin infection diagnosed by piercing of hair follicles into the sinus wall.<sup>[1]</sup> Pilonidal sinus was 1st reported in 1883 by Herbert Mayo and further characterized by Hodges in 1880.<sup>[2]</sup> The term pilonidal derived from Latin word Pilus-hair and nidus-nest.<sup>[3]</sup> Jeep driver during second world war have local irritation near sacrococcygeal region hence Pilonidal sinus also known as "Jeep disease" in 1944 during second world war.<sup>[4]</sup> A natal cleft in sacrococcygeal region is a suitable environment for sweating, maceration, bacterial infection and invagination of hair follicles.<sup>[3]</sup> Pilonidal sinus also associated with Obesity, sedentary lifestyle but the actual origin is not entirely understood. The congenital and acquired theories effort to explain the pathogenesis of

pilonidal sinus disease. While the etiology has not been fully clarify but pilonidal sinus thought to be origin by the formation of an acute and chronic infection under the skin by hair shed.<sup>[5]</sup> Pilonidal mainly common in young adult male between age group 16-25 year and an incidence of pilonidal sinus is 26 patient per 100,000 people.<sup>[1,6]</sup> The ratio of male to female patients is 4:1 hence its common in male because of hirsute nature of the post-puberty. Pilonidal sinus uncommon in Asians or Africans than Caucasians because of differing hair pattern and growth. Office of Population Censuses and Surveys in England collected a data and explain that about 7000 people were admitted to hospital with a mean hospital stay of 4.3 days for the cure of pilonidal sinus and one quarter of these were female. Pilonidal sinus is uncommon previous to puberty and after 40 years.<sup>[7]</sup> There are several surgical technique described for treatment of pilonidal sinus but a perfect treatment has yet to be originate. The aim of present study was to carry out simple technique in treatment of pilonidal sinus and its incidence in gender.

## MATERIALS AND METHODS

The present study was conducted in the Department of Surgery Government medical college Ambikapur

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and Maha maya Hospital Ambikapur surguja C.G. Between the period of 2015-2017. A total 25 patients (24 Male and 1 Female) with Pilonidal sinus disease were studied. The patients general information Performa was taken such as Name of Patient, Age, Sex, clinical feature and baseline hematological examination like TLC, DLC, Hb, ESR, blood urea /sugar, Hepatitis were done before surgery. Natal cleft shaved and disinfected before surgery with povidone-iodine solution. The patient was placed in operation table in jack knife prone position with leg a little abducted for good exposure of intergluteal region. Patient Operated by Excision without primary closure procedure and operated under the general or spinal anesthesia and antibiotic were administered intravenously. Paint and drapp was done with betadine and antiseptic solution in the region of natal cleft. Methylene blue dye injected in sinus opening with blunt needle to demarcate sinus and its tract extension. Then put a blunt probe in the opening and see the length of sinus. According to that an elliptical incision was given around the sinus in the skin and down up to the presacral fascia of sacral bone. Blood vessels are protected with electrocautery. Then it was excised the full sinus along with sinus tract. Then the wound cavity was packed with antiseptic solution soaked gauze. After the Para-surgical procedure the patient are allowed to go home and receive dressing of wound for few days. A dose of antibiotic, anti-inflammatory, antiprotozoal was given to the patient. The patient were followed up to healing of wound and any complication related to it. Then the complete data was taken and written in tabulated form.

## RESULTS

The present study was done on 25 patients suffer from Pilonidal sinus which include 24 [96%] (age between 16-45 year) Male and 01 [4%] Female (age between 16-45 year). The entire patient underwent Excision without primary closure procedure. Incidence of male pilonidal sinus disease is more compare to female i.e. 24:1 out of which maximum number of male patient i.e. 15 [60%] showed in age group of 16-25 year followed by age group 26-35 year i.e. 08 [32%] and minimum number of patients exhibited in age group 36-45 year i.e. 01 [4%]. Female pilonidal sinus patients 01 [4%] exhibited in age group 26-35 year given in tabulated form in [Table 1]. In this study primary pilonidal sinus disease of 06 patients cure between 07-14 days, 12 patients cure between 15-21 days, 05 patients cure between 22-28 days and 02 patients cure between 29-35 days. Female take more cure time compare to male. There were no Recurrent Pilonidal sinus patients studied and 1 patient have a post-operative complication given in tabulated form in [Table 2].

**Table 1: Distribution of pilonidal sinus based on Age and Gender.**

Age	Gender		Ratio	N[%]
	Male	Female	Male :Female	
16-25year	15[60%]	0		15 [60%]
26-35year	08 [32%]	01 [4%]		09 [36%]
36-45year	01 [4%]	0		01 [4%]
Total	24 [96%]	01 [4%]	24:1	25 [100%]

**Table 2: Duration to healing and complication of Pilonidal sinus after Excision without primary closure procedure.**

Duration to cure in days	No. Of Patient		Postoperative Complication
	Primary Pilonidal sinus	Recurrent Pilonidal sinus	
07-14	06	0	01
15-21	12	0	0
22-28	05	0	0
29-35	02	0	0

## DISCUSSION

Pilonidal sinus is common disease mostly occurs in the sacrococcygeal region between intergluteal and it may occupy in armpit, suprapubic area, sole of the foot, the penis, the clitoris, periumbilical area, interdigital spaces. Incidence of pilonidal sinus is 26 cases per 100,000 people and affecting young adult men more than women.<sup>[8-10]</sup> The pathogenesis of pilonidal disease is not known but There are two theories they are acquired and congenital theories. Majority of author support the acquired theory.<sup>[11]</sup> Pilonidal sinus may arise in one of the following they are Quiescent phase, Acute abscess, Sinus tracts and Complex disease characterized by chronic or recurrent abscesses with extensive, branching sinus tracts.<sup>[9]</sup> The treatment of pilonidal sinus disease is frequently Surgical.<sup>[12]</sup> The commonly used procedures for the treatment of pilonidal sinus disease are Simple incision and drainage, Laying open the tract (Buie technique, Lord and millar technique, Bascom technique), Injecting phenol as a sclerosing agent into pilonidal Sinuses (maurice and greenwood), Excision without primary closure, Excision and primary closure, Marsupialization (partial closure), Fistulotomy, Plastic surgical procedures (Fasciocutaneous flaps like the V-Yflap, Rhomboid excision and the Limberg flap, Karydakias procedure, Z-plasty closure, Gluteus maximus myocutaneous flap, Modified Dufourmentel flap, S-type oblique excision, Bascom technique).<sup>[13]</sup> The treatment procedure of pilonidal sinus disease should be depends on choice of surgical approach on the surgeon's familiarity with the procedure. Treatment procedure perceived minimal pain, short hospital stay, minimal wound care, low recurrence rate, less morbidity.<sup>[2,14]</sup>

This study was done on 25 patients suffer from Pilonidal sinus which include 24 male and 01 Female, that means Incidence of pilonidal more in male than female i.e 24:1 which correlate with the study of Nada m et al. 15, Sondenaa K et al.<sup>[1]</sup>

In this study Pilonidal disease mainly affects age group between 16-25 years correlated with Singh H et al.<sup>[13]</sup> and recurrence rate in this study is low which correlated with Singh H et al.<sup>[13]</sup> Hemmati et al.<sup>[16]</sup>

The present study reveal that the Excision without primary closure procedure is a simple procedure having minimum recurrence rate, short healing time, short or no hospital stay and rate of complication is low.

## CONCLUSION

In this study, Excision without primary closure procedure was used for the treatment of Pilonidial sinus disease. It's revealed that this is a simple procedure having minimum recurrence rate, short healing time, short or no hospital stay, less healing time and rate of complication is low. In this study, Incidence pilonidal sinus was more in male compare to female. Hence, this studies useful for Clinicians, Surgeon for proper clinical diagnosis and treatment of disease.

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