

PILONIDAL SINUS EXCISION UNDER LOCAL ANESTHESIA: A DAY CASE EXPERIENCE

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ABSTRACT

Objective: To assess the outcome of pilonidal sinus disease excised under local anesthesia

Materials and Methods: This was a prospective study conducted in the department of surgery Khyber teaching hospital after approval from the ethical board and after fully informed written consent from April 2018 to April 2019, 1 year in duration carried out on 40 patients. They were followed for minimum period of 6 months post operatively. Age, presentation, inpatient stay, and complications were recorded.

Results: A total of 40 patients were diagnosed with PND. All patients were male with a mean age of 23.04 +- 2.43. The mean operative time was 40 min (range 22-45 min). The duration of hospital stay ranged from 4 to 8 hours. Healing time was 14-21 days. 5 cases (12.5%) presented with wound pain, which was treated with better combination of painkillers. One patient (2.5%) presented with wound infection without disruption, which was treated with repeated dressing. One patient (2.5%) patient presented with recurrence after 6 months which was again excised.

Conclusion: Complication rate can be kept surprisingly low if PND is excised minimally under local anesthesia and left for secondary intention healing.

Keywords: Pilonidal sinus disease, wide local excision, secondary wound healing, day case surgery

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INTRODUCTION

Pilonidal sinus (PS) is referred to a condition when sinus contains midline hair in the natal cleft.¹ An above average recurrence rate along with the probability of becoming infected and abscess formation are associated with this disease.² Therapeutic method has been emphasised by previous studies, however, it is mainly associated with recurrence risk. Prevention, obviously, is preferred to therapeutic method mainly because of cost-effectiveness of preventive strategies over therapeutic ones.³

In general practice, pilonidal sinus disease is encountered quite often in adult population with male pre-

dominance at a ratio of 3:1 to females. In about 15% of cases, it can present as an abscess. The age range is found to be 15 to 30 years with incidence of about 0.07% in the United States.⁴

The disease has caused morbidity in young age population with its chronic inflammatory nature. The most common affected area is sacrococcygeal or "tail bone" followed by the umbilicus which is hub for hair impaction and thus chances of penetration into the skin.⁵

Long ago, Karydakis proposed three factors for the formations of PNS: the foremost comes the invader which is the presence of hair in the area, secondly; it's the force of insertion and 3rd, the proneness of skin to the penetration of hair. These factors along with patient factors such as negative suction of loose hair, overweight patients, moist areas, hairy people and prolonged sitting at one place will exaggerate the formation of such sinuses.⁶

There are multiple treatment modalities for the management of PND from non-invasive methods such

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as regular shaving of the area, to minimal invasive procedures like incision and drainage, phenol application or cryosurgery. More radical approaches can be adopted to deal with chronic recurrent sinuses, the techniques being are wide local excision with primary closure, wide local excision with marsupialization, wide local excision and leaving the wound open to secondary intention healing and wide local excision with flap closure.³

The rationale of this study was to see whether the wide local excision with secondary wound healing can be a good choice of procedure as a day case as it can be done under local anesthesia and hence can be a future guideline modality of treatment for such sort of diseases. This can effectively minimize the cost burden on hospital as well as the patients can return to their routine lives at earliest. The complications rate can be brought down and dealt with accordingly.

MATERIAL AND METHODS

This was a prospective study conducted in the department of surgery Khyber teaching hospital after approval from the ethical board and research committee of the hospital and after fully informed written consent signed by patients, from April 2018 to April 2019, 1 year in duration carried out on 40 patients. They were followed for minimum period of 6 months. All consecutive patients who presented to surgical OPD meeting the inclusion criteria which included males only aged 15-45 years with complaint of pain in the natal cleft or discharge, and subsequent diagnosis of PND made on clinical examination. All patients were examined by a consultant surgeon with a complete history taken by the trainee medical officer in the OPD.

All patients had midline pits, and only three patients had an additional lateral sinus opening due to a branched tract. All patients were treated with surgical excision under local anesthesia and wound left for secondary intention healing. The patients were then followed for 6 months post operatively.

Age, presentation, inpatient stay, and complications were recorded. Data was analyzed by using SPSS version 20 on computer. Standard Deviation was computed for numerical variables like age. Frequency and percentages were computed for categorical variables (post op complications such as seroma formation, infection, pain, recurrence). Mean was calculated for continuous variables like operative time and hospital stay. Strict exclusion cri-

teria was followed to control the confounders and bias which included females, any patients with comorbid con-

Table 1: Clinical presentation

Clinical presentation	n (%)
Pain	32 (80%)
Discharge	10 (25%)
Lateral pits	3 (7.5%)

Table 2: Operative time

Operative time	40 min (22-45 min)
Hospital stay	4-8 hours
Healing time	15 days (14-21 days)
Wound seroma	0 case (0 %)
Infection	1 (2.5%)
Pain	5 (12.5%)
Recurrence	1(2.5%)

ditions such as diabetes, hypertension, recurrent PNDs and those not within age range (15-45 years). The data was plotted in form of charts and tables.

RESULTS

A total of 40 patients were diagnosed as PND. All patients were male with a mean age of 23.04 +- 2.43. The mean operative time was 40 min (range 22-45 min). The duration of hospital stay ranged from 4 to 8 h. Healing time was 14-21 days. 5 cases (12.5%) presented with wound pain, which was treated with a better combination of pain-killers. One patient (2.5%) presented with wound infection without disruption, which was treated with repeated dressing. One patient (2.5%) patient presented with recurrence after 6 months which was again excised.

DISCUSSION

Long ago in 1833, hair containing sinus has been named by Herbert Mayo. With the advent of time, Hodge coined the term pilonidal (Latin: pilus= hair and nidus = nest) in 1880. Under certain conditions in sacrococcygeal area such as presence of hair, contamination with sweat and maceration, pilonidal sinus is formed. Furthermore, the grinding movement of the hips encourages the loose hair to make its way into the sinus.⁷ In World War 2, the disease was rightly named as “jeep disease” as it prevailed most commonly in jeep drivers.⁸

Various managements have been devised for pilonidal sinus in the form of minimal approach such shaving the natal cleft and incision and drainage of the affected area. However, more radical approach is more in fashion

to reduce its recurrence, in the form of wide local excision only. At times, the defect needs to be reconstructed with certain methods of flaps. So far, the non-elimination of recurrence regardless the procedure poses a challenge to the surgeon and thus no ideal method has been recommended. Any procedure can be regarded as ideal if it causes minimum pain to the patient, more cost effectiveness, less hospital stay, the approach to operate is relatively simple and last but not the least, the recurrence rate should be kept at minimum.^{3,9-11}

Once opted to excise the wound, the management of wound needs special attention. The defect left after wide local excision can either be closed or left open for secondary intention healing. The primary closure can impose certain problems to the wound by being under tension which could compromise the blood supply of the healthy tissue as well as can inflict pain to the patient.^{10,12,13} It can give rise to wound infections and the disruption of wound.¹⁴ In our patients, we opted to leave the wound open to secondary healing, thus minimizing the complications arising from primary closure of wound.

The basis of flap reconstruction is to eliminate the risk of wound being under tension but still reserved to be performed in more complex cases.¹¹ So in our experience of wide local excision with secondary intention healing, we adopted the perspective of minimal invasive approach as a day case surgery to be performed and hence make it more cost effective. The technique needs to include two basic principles; whole of the diseased tissue excision and making the tissue tension free.¹⁰

Moreover, the technique is simple to carry out with preservation of healthy tissue and it can be carried out under local anesthesia. Without any doubt, this approach makes it a perfect day case surgical procedure with very few complications as compared to those done under spinal anesthesia or General anesthesia.^{12,15}

In our study, as the wound was left open, there had been no cases of seroma in follow up which occurs in primary closure, we encountered only one patient (2.5%) with minor wound infection which was addressed with regular change of dressings only and we faced one case(2.5%) recurrence after 6 months which was again excised in the similar fashion. They only major complaint we dealt with mostly was post op pain which was effectively treated with good but simple combination of oral analgesics.

Although many procedures such as Karydak's technique, Bascom's cleft excision, simple drainage, and open excision with midline closure have reportedly low re-

currence rates which are 1-4%, 10% ,25% and 3.5-4.2% respectively, our recurrence rate was exclusively low (2.5%) which is an achievement for such a simple and office approach in comparison to already established techniques.¹⁶

LIMITATIONS

The study being conducted on small number of cohort and its validation can be processed further on large number of patients. Furthermore, the recurrence follow up time was not adequate enough to include the long term recurrence rates hence more prolonged follow up time would be required to validate that.

CONCLUSION

Complication rate can be kept surprisingly low if PND is excised minimally under local anesthesia and left for secondary intention healing. It causes less financial burden to health system if diseases like these are treated in such manner.

RECOMMENDATIONS

We recommend performing the Pilonidal sinus disease to be excised under local anesthesia and experience the low complication rates as compared to more sophisticated techniques.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

Naeem M: Concept ,Manuscript

Mabood W: Manuscript, Drafting ,Proofreading

Imran M: Bibliography

Waheed R: Bibliography ,Proof reading

Ali S,; Data Collection ,Data analysis

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.