

COMPARISON OF SECONDARY INTENTION HEALING VS PRIMARY INTENTION HEALING FOR THE TREATMENT OF CHRONIC PILONIDAL SINUS

Rashid Aslam, Rizwan Ahmad, Zeeshan Saboor, Bushra Rehman, Zahid Aman

Pilonidal sinus is an abnormal hair containing pocket in the skin usually located in the intergluteal cleft.¹ Regarding the pathogenesis of pilonidal sinus, multiple theories have been presented; initially labeling it as an embryological entity followed by the view that it is an acquired condition whereby sitting and bending play the role of predisposing factors.²⁻⁴

Many procedures have been described to treat this condition but so far the procedures involving the complete excision of the tract have been widely accepted and are practiced. After complete excision of the tract, whether to leave the tract open or close it by primary intention has been the matter of debate.^{4,5} Those who are in favor of secondary intention argue that the procedure has a lower recurrence rate while those who advocate primary intention are of the view that the hospital stay is shortened and the wound heals quickly.^{4,5}

Here in our study, after a slight modification in the two techniques by using a tie-over dressing in the secondary intention healing for 48 hours followed by regular change of dressings, we decided to compare secondary intention healing vs primary intention healing for the treatment of chronic pilonidal sinus in terms of the length of hospital stay and rate of recurrences.

MATERIALS AND METHODS

A total of 70 patients were selected. They were randomly divided into two groups. Group A, 35 patients, was the one where the patients would get primary intention healing by approximating the wound edges with sutures following complete excision of the tract while the Group B, 35 patients, was the one where the patients would have a tie-over dressing for 48 hours after complete excision of the tract followed by daily change of the dressing. There was no significance difference in the age and sex between the two groups. All the patients had their anesthesia assessment done prior to general anesthesia. Prophylactic antibiotics were administered

Department of Surgery, Hayatabad Medical Complex, Peshawar.

Address for correspondence:

Dr. Rashid Aslam

Senior Registrar

Surgical "B" Unit Hayatabad Medical Complex, Peshawar

Email: docraashid@gmail.com

Contact #: 0333-3944949

in both groups before induction.

After proper induction of the general anesthesia, the patients were positioned in the left lateral position. The area was cleaned with pyodine, shaved and draped in sterile drapes. Complete excision of the tract was carried out followed by either tie-over dressing or primary closure with absorbable sutures; polyglactin for the subcutaneous tissue and nonabsorbable sutures; prolene for the skin as the case may be. In case of group B, the patient would have tie-over dressing for 48 hours after which the dressing would be changed daily. The group A patients would have their stitches opened on 14th post op day. All the patients were followed up for a period of 1 year in terms of recurrence. Out of the 70 patients, 3 were lost during the follow up. Length of hospital stay was measured in mean while rate of recurrence was measured using the chi-squared test.

RESULTS

In group A, out of the 35 patients, 3 were lost in the follow up, so the number dropping to 32. The mean length of hospital stay in group A was 3.5 days (range, 3-6 days) while in group B was 4.4 days (range, 4-6 days). Recurrence was reported in 3 patients of group A; 9.37 percent. While none of the patients in group B was found to have recurrence at the end of one year follow up period.

	no recur- rence	recur- rence	Margin- al Row Totals
Group A	29 (30.57) [0.08]	3 (1.43) [1.71]	32
Group B	35 (33.43) [0.07]	0 (1.57) [1.57]	35
Marginal Column Totals	64	3	67 (Grand Total)

The chi-square statistics were 3.43. the p-value was 0.0638 and was not significant ($p < 0.05$)

DISCUSSION

The ideal surgery for a chronic pilonidal sinus is the one that is simple and safe with minimal hospital stay and recurrence rate.⁶ although secondary intention healing is considered safe in terms of recurrence but it requires multiple dressing changes and care of the wound for approximately a period of 6 weeks till healing

has completed.⁷ excision with primary closure has the benefit of quicker healing, less days off-work and early return to work.⁸⁻¹⁰ Some surgeons have reported a dehiscence rate of around 50 % and a recurrence rate of 20% in primary closure.¹¹⁻¹²

In our study the results were comparable to international studies in terms of length of hospital stay and rate of recurrence. In a study carried out in turkey, the rate of recurrence was found out to be 4.4% in primary closure group and 0% in secondary intention group.⁷ However; they slightly modified the two procedures, applying absorbable sutures to skin edges approximating it to the sacral fascia. But in the broad term, the techniques were the same. They attributed the increased incidence of dehiscence and recurrence to the higher incidence of wound infection in the primary closure group. Study by M.Fuzan et al showed that though the patients having secondary intention healing had a longer hospital stay due to drains but the return to work was quicker due to quicker healing, so the overall efficacy still remains questionable.⁷

Other international studies comparing the various techniques have come up with similar results.¹³⁻¹⁵ over all, the emphasis has been given to the prioritizing the various methods to the individual needs of the patients e.g a patient having surrounding cellulitis should be considered a candidate to the secondary intention technique to minimize the incidence of wound infection and dehiscence in the short term and recurrence in the long term.

CONCLUSION

Secondary intention healing though has shorter hospital stay and lower recurrence rate but is considered cumbersome for the patient for regular change of dressing and longer time period required for complete healing. Primary closure of the wound on the other hand leaves the patient with the advantage of quicker healing. Both the procedures are considered efficient in the long term, however, the choice of the procedure should be individualized as to the patients requirements

REFERENCES

1. "Pilonidal Cyst: Definition". Mayo Clinic. December 5, 2012. Retrieved April 22, 2016

2. Raffman R. A re-evaluation of the pathogenesis of pilonidal sinus. *Ann Surg* 1959;150:895-903. PubMedCrossRef
3. Page BH. The entry of hair into a pilonidal sinus. *Br J Surg* 1969; 56: 32-9. PubMed
4. Buie LA, Curtiss RK. Pilonidal disease. *Surg Clin North Am* 1952; 32: 1247-59.
5. Lamke LO, Larsson J, Nylen B. Results of different types of operation for pilonidal sinus. *Acta Chir Scand* 1974; 140: 321-4. PubMed
6. Mandel SR, Thomas CG Jr. Management of pilonidal sinus. *Surg Gynecol Obstet* 1972; 134: 448-50. PubMed
7. Which technique for treatment of pilonidal sinus-open or closed? M. fuzan, H Bakir, M Soyulu
8. "Pilonidal Cyst: Causes". Mayo Clinic. December 5, 2012. Retrieved February 8, 2013.
9. Da Silva JH (2000). "Pilonidal cyst: cause and treatment". *Dis. Colon Rectum* 43 (8): 1146-56. doi:10.1007/bf02236564. PMID 10950015.
10. Bascom, John; Bascom, Thomas (October 2002). "Failed Pilonidal Surgery". *Archives of Surgery* 137 (10): 1146-50. doi:10.1001/archsurg.137.10.1146.PMID 12361421.
11. Bartlett W Jr. Pilonidal cyst and sinus, their management and operative treatment. *Surg Gynecol Obstet* 1945; 80: 69-74.
12. Ferguson LK, Mecray PM Jr. Pilonidal cysts: excision and primary suture in ambulatory patients. *Am J Surg* 1937; 36: 270-8. CrossRef
13. Elsey E, Lund JN (2013). "Fibrin glue in the treatment for pilonidal sinus: high patient satisfaction and rapid return to normal activities". *Techniques in coloproctology* 17 (1): 101-104. doi:10.1007/s10151-012-0956-9
14. Sevinç B, Karahan Ö, Okuş A, Ay S, Aksoy N, Şimşek G. Randomized prospective comparison of midline and off-midline closure techniques in pilonidal sinus surgery. *Surgery*. 2015 Oct 31. [Medline].
15. McCallum I, King PM, Bruce J. Healing by primary versus secondary intention after surgical treatment for pilonidal sinus. *Cochrane Database Syst Rev*. 2007 Oct 17. CD006213. [Medline].