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Original Article

Are the concerns of surgeons about cosmetic outcomes in pilonidal disease surgery more than necessary?

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Abstract

Aim: Pilonidal disease is a chronic inflammatory process. From time to time poor cosmetic results can be obtained after surgery. In this study, it was aimed to investigate the effects of cosmetic results and the satisfaction level of the cases in patients who underwent surgery with different surgical techniques due to pilonidal disease.

Material and Methods: The information about study was given to cases, which were operated due to pilonidal disease between January 2014 and December 2014 and could be contacted by phone. The questionnaire was applied to 125 cases who agreed to participate in the study. Cases were divided into two groups as primary excision with midline closure applied group and other surgical techniques applied group. The questions about the postoperative results were asked to the cases.

Results: There was no statistically significant difference between the two groups in terms of pain duration, painless sitting-walking times, time to return to daily life, complications, reoperation rates and patient satisfaction of surgical scar. It was detected that there was more recurrence in the primary excision group and the results were statistically significant (p = 0.038). In the both groups, it was found that there is no statistically significant difference in the satisfaction questionnaire on surgical scar. (p> 0.05).

Conclusions: The surgical scar can cause significant cosmetic problems in surgery treatment of pilonidal disease. Poor cosmetic results on cases may sometimes be more important. The results of this study showed that patients care more about the functional outcomes of treatment than the cosmetic results.

Keywords: Cosmetic; Scar,Surgery; Pilonidal Disease.

INTRODUCTION

Pilonidal disease is often seen in the intergluteal area. The disease is characterized by redness, swelling and pain in this region. The incidence is 26 per 100000 dir (1,2). It is mostly seen in young men. Pilonidal disease shows different clinics ranging from asymptomatic pilonidal sinus to pilonidal abscess. While asymptomatic patients do not require treatment, the surgery treatment in the pilonidal abscess maintains the importance. Surgical abscess drainage and appropriate antibiotherapy are current treatment options (3,4). There are a wide array of treatment options for patients ranging from phenol applications to aggressive excisions in chronic disease. The poor cosmetic results after surgery may occasionally be obtained due to the techniques used. After incorrect or incomplete surgical choices; recurrences can develop and this situation affects negatively the daily lives of patients and leads to high treatment costs. In this study, it was aimed to investigate the effects of cosmetic results and the satisfaction level of the cases in patients who underwent surgery with different surgical techniques due to pilonidal disease.

MATERIAL and METHODS

The information about study was given to cases, which were operated due to pilonidal disease between January 2014 and December 2014 and could be contacted by phone. The questionnaire was applied to 125 cases who agreed to participate in the study. Five patients who were operated due to recurrence were excluded from the study. The other 120 cases were divided two groups as the primary excision with midline closure applied group (n = 73) and the flap techniques, marsupialization and secondary intention healing applied group (n = 47) (Table 1).

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Table 1. Operations of Group II

Operations	Group II
Lateral Flap	28
Rhomboid Flap	14
Marsupialization	2
Secondary Intention Healing	3
Totaly	47

On the morning of operation, the area to be operated was shaved. All cases were operated under spinal anesthesia in prone position. A single dose of antibiotic prophylaxis was administered to all cases. In all cases, 3/0 propylene suture was used in skin closure after excision. Patients were discharged on day one and sutures were removed on day 14. Drain was removed when drainage was below 20 cc/ day in cases where drain system was used. After suture removal, cases without additional complications were not called for control. The questionnaire was arranged for patients who accepted to participate in the study with the telephone interview. The questions about the postoperative pain duration, painless sitting and walking times, time to return to daily life, complications, and patient satisfaction in terms of surgical scar were asked to the cases. Complications related to spinal anesthesia were not considered. The questionnaire consisted of the following questions:

1- How many days did you need painkiller after the operation?

2- Which day in postoperative period did you start sitting painless?

3- Which day of postoperative period did you start walking normally?

4- Which day in postoperative period were you back to normal life?

5- Did you encountered with the unwanted results after surgery such as wound dehiscence or wound discharge?

6- Are you satisfied with the surgical scar?

RESULTS

Ninety eight (80.8%) of the cases participating in the study were male and 23 (19.2%) female. There was no statistically significant difference between the two groups in terms of pain duration, painless sitting-walking times, time to return to daily life, complications, reoperation rates and patient satisfaction of surgical scar. It was detected that there was more recurrence in the primary excision group and the results were statistically significant (p = 0.038). There was no significant difference between the groups in terms of wound dehiscence and wound site infection development in post-operative period. In the both groups, it was found that there is no statistically significant difference in the satisfaction questionnaire on surgical scar. (p> 0.05). When the groups were evaluated in terms of pain duration, the transition time to painless sitting, the time to start of normal physical activity, wound dehiscence, wound discharge and reoperation, the results were found to be similar between the two groups (Table 2).

Table 2. Results

	Group I (n=73)	Group II (n=47)	p
Pain duration (mean SD)	11.47± 11.84 day	13.12 ±13.81 day	p >0.05
Pain duration (median)	7 day (1-45)	7 day (1-60)	p >0.05
Transition Time to Painless Sitting (mean SD)	15.58 ±11.21 day	22.91±28.15 day	p >0.05
Transition Time to Painless Sitting (median)	12 day (1-45)	15 day (4-120)	p >0.05
Time to Start Normal Physical Activity (meanSD)	19.84 ±15.71 day	18.72±13.09 day	p >0.05
Time to Start Normal Physical Activity (median)	20 day (2-60)	15 day (4-60)	p >0.05
Wound dehiscence (n)	13 (17.8 %)	9 (20.9 %)	p >0.05
Wound discharge (n)	17 (23.2 %)	9 (20.9 %)	p >0.05
Recurrence (n)	16 (21.9 %)	3 (6.3 %)	**P=0.038***
Satisfaction with cosmetic results (n)	51 (69.86%)	38 (80.85 %)	p >0.05
Reoperation (n)	2 (2.73%)	3 (6.38 %)	p >0.05

*Kruskal Wallis test, p <0.05 values are significant. SD: standart deviation

DISCUSSION

Pilonidal disease is a chronic inflammatory process seen mostly in young men. The etiology is not completely clear (5,6). In a study by Karydakis with 6545 patients, it was reported that the loose hairs, the frictional force and the vulnerable skin are the main factors that lead to pilonidal disease formation (7). It often occurs in the sacrococcygeal area. It can rarely be seen between the breast, belly and fingers (8). Family history, male sex, young age, hirsute individuals, obesity, poor self-care, chronic local irritation, local trauma are risk factors for pilonidal sinus (6,9-11). In a study conducted by Akinci et al., it was observed that the natal cleft depth was also a risk factor for pilonidal disease (12).

Asymptomatic cases can be followed conservatively. In these cases, the suggestions such as the cleaning of natal cleft from hairs, regular self-care, removal of loose hairs from the pilonidal sinus area are important (13). Natal cleft can be cleaned with hair removal cream, razor or laser epilation. In order to prevent the recurrence, the superiority of the three methods to each other was not revealed clearly. There are studies in the literature that post-surgical laser epilation is effective in preventing recurrence (14). However, there are also studies showing that there is no effect. In a study conducted by Demircan et al., it was shown that the laser epilation to prevent recurrence is not ss successful as people think (3).

Many techniques as surgical treatment were described. In a study conducted by Dogru et al., it was reported that the crystallized phenol was a minimally invasive technique effective in the treatment of pilonidal disease with low recurrence rates (15). Recurrence rates of some procedures are low, but poor cosmetic results can occur. In primer closure techniques, recurrence rates are relatively higher and the early recovery is seen (2). Flap applications have lower recurrence rates and fewer wound infection risks (1,10,11,16). However, cosmetic results sometimes may not be good as desired because of the wide range of excision. In a study conducted bu Okus et al., the limberg flap and tension free primer closure techniques were compared and similar results were reported (6). Marsupialization provides a smaller wound and, it is aimed to spontaneous closure of the wound in this technique. It is associated with a low recurrence rate. However, the duration of recovery is long and daily dressing is required (16). In our study, there was more recurrence in the primary closure group. The difference was statistically significant (p = 0.038). In a meta-analysis carried out by Enriquez-Navascues et al., the minimally invasive approach in pilonidal disease surgery was proposed to avoid from extensive excision and protect healty tissue as possible as (9). In our study, although there was no significant difference in terms of cosmetic satisfaction, there was more recurrence in primary repair group.

Recurrence rates in the midline closure technique are levels of 11.7% (2). In our study, this rate was 21.9% in the primary closure group. In the other group, this rate was 6.3%. Wound infection rates were 12.4% in the midline closure and 7.6% in the off-line closure (2). In our study, this rate was 23.2% in the midline closure. In the other group, it was level of 20.9%. The rate of infection was higher in our study than the literature. No statistical significance was detected between the two groups.

In the light of all data, the surgical treatment in pilonidal sinus disease provides the best cure. However, it is still unclear which surgical technique is more optimal. Recovery after primer closure is faster, but recurrence rates in this technique are higher than other techniques.

In this study, the cosmetic effects of different surgical procedures on patients were searched rather than emphasizing the postoperative results. Different techniques used for seeking perfection by surgeons due to cosmetic concerns sometimes cause the undesirable results. Contrary to expectations, the cosmetic satisfaction rate was lower in the primary closure group than the other group (69.86% -80.85%). However, the results were not statistically significant. For this reason, we think that the most appropriate technique is the technique, which is the most applied and has the least recurrence rate without regard to cosmetic concerns.

CONCLUSION

In conclusion, the surgical scar can cause significant cosmetic problems in surgery treatment of pilonidal disease. Poor cosmetic results on cases may sometimes be more important than functional outcomes of the surgical treatment. For this reason, cosmetic results may also cause concern on surgeons. The results of this study showed that surgeons care more about the functional outcomes of treatment than the cosmetic results. As surgeons, we have to focus on the surgical technique that we can get the best functional result by considering the cosmetic results as much as necessary.

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REFERENCES

1. Saydam M, Ozturk B, Sinan H, et al. Comparison of modified Limberg flap transposition and lateral advancement flap transposition with Burow's triangle in the treatment of pilonidal sinus disease. Am J Surg 2015;210:772-7.
2. McCallum IJ, King PM, Bruce J. Healing by primary closure versus open healing after surgery for pilonidal sinus: systematic review and meta-analysis. BMJ 2008;336:868-71.
3. Demircan F, Akbulut S,Yavuz R, et al. The effect of laser epilation on recurrence and satisfaction in patients with sacrococcygeal pilonidal disease: a prospective randomized controlled trial.Int J Clin Exp Med 2015;8:2929-33.
4. Khanna A, Rombeau JL. Pilonidal Disease. Clin Colon Rectal Surg 2011;24:46-53.
5. Tavassoli A, Noorshafiee S, Nazarzadeh R. Comparison of excision with primary repair versus Limberg flap. Int J Surg 2011;9:343-6.
6. Okuş A, Sevinç B, Karahan O, et al. Comparison of Limberg flap and tension-free primary closure during pilonidal sinus surgery. World J Surg 2012;36:431-5.
7. Karydakis GE. Easy and successful treatment of pilonidal sinus after explanation of its causative process. Aust N Z J Surg 1992;62:385-9.
8. Ballas K, Psarras K, Rafailidis S, et al. Interdigital pilonidal sinüs in a hair-dresser. J Hand Surg 2006;31:290-1.
9. Enriquez-Navascues JM, Emparanza JI, Alkorta M, et al. Meta-analysis of randomized controlled trials comparing different techniques with primary closure for chronic pilonidal sinüs. Tech Coloproctol 2014;18:863-72.
10. Singh R, Pavithran NM. Adipo-fascio-cutaneous Flaps in the Treatment of Pilonidal Sinus: Experience with 50 Cases. Asian J Surg 2005;28:198-201.
11. Polat C, Gungor B, Karagul S, et al. Is oval flap reconstruction a good modification for treating pilonidal sinuses? Am J Surg 2011;201:192-6.
12. Akinci OF, Kurt M, Terzi A, et al. Natal cleft deeper in patients with pilonidal sinus: implications for choice of surgical procedure. Dis Colon Rectum 2009;52:1000-2.
13. Armstrong JH, Barcia PJ. Pilonidal sinus disease. The conservative approach. Arch Surg 1994;129:914-9.
14. Odili J, Gault D. Laser depilation of the natal cleft: an aid to healing the pilonidal sinus. Ann R Coll Surg Engl 2002;84:29-32.
15. Dogru O, Camci C, Aygen E, et al. Pilonidal sinus treated with crystallized phenol: an eight-year experience. Dis Colon Rectum 2004;47:1934-8.
16. Akin M, Leventoglu S, Mentes BB, et al. Comparison of the classic Limberg flap and modified Limberg flap in the treatment of pilonidal sinus disease: a retrospective analysis of 416 patients. Surg Today 2010;40:757-62.