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Body Image and Cosmesis after Pilonidal Disease Surgery

Pilonidal Hastalık Cerrahisi Sonrası Vücut İmajı ve Kozmezis

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ÖZET

Amaç: Pilonidal hastalık genç yaşın hastalığıdır. Bu çalışmanın amacı pilonidal hastalık cerrahisinin ve uygulanan farklı ameliyat tekniklerinin ameliyat öncesi ve sonrası dönemlerde vücut imajı ve kozmetik sonuçlar üzerine etkisini araştırmaktır.

Materyal ve Metod: Çalışmaya toplam 29 hasta dahil edildi. Eksizyon ve primer orta hat kapama yapılan grup (n= 10 hasta) ve rhomboid eksizyon ve limberg flep uygulanan grup (n=19 hasta). Vücut imajı ve kozmetik sonuçları değerlendirmek için hastalara vücut imajı anket formu (BIQ) uygulandı. Beden imajı ve kozmetik sonuçlar preoperatif dönemde, cerrahi sonrası erken dönemde ve postoperatif 2.ayda değerlendirildi.

Bulgular: Her iki grupta da postoperatif beden imajı ve kozmetik skorları, preoperatif değerlerden anlamlı olarak daha yüksek bulunmuştur (p<0.01). Ancak, iki grup arasında ameliyat öncesi ve sonrası vücut imajı ve kozmetik skorları açısından anlamlı farklılık yoktu.

ABSTRACT

Objective: Pilonidal disease is a disease of young people. The objectives of this study were to evaluate body image and cosmetic results in patients with pilonidal disease who underwent surgery, and to determine how patients experienced the pre- and postoperative periods after different procedures.

Material and Methods: Twenty nine patients were enrolled in this study: 10 consecutive patients who had undergone excision and primary midline closure and 19 patients who had rhomboid excision and limberg flap procedures. To evaluate body image and cosmesis, the Body Image Questionnaire (BIQ) was used. Body image and cosmesis were assessed preoperatively, postoperative early and 2 months after surgery.

Results: Postoperative body image and cosmesis scores were significantly higher than the preoperative scores in both treatment groups (p<0.01). However, there were no significant differences in preoperative and

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Sonuç: Pilonidal hastalığının cerrahi tedavisi bozulmuş olan vücut imajını düzeltebilir. Bu çalışma pilonidal hastalığı olan hastaların kozmetik sorunlardan ziyade fonksiyonel sorunlarından endişe duyduklarını desteklemektedir.

Anahtar Kelimeler: Vücut imajı, Kozmezis, Pilonidal hastalık, Cerrahi

postoperative body image and cosmesis scores between the two groups.
Conclusion: Surgical repair of chronic pilonidal disease can improve the body image. This study suggests that patients who have suffered pilonidal disease are far more concerned about the reconstruction of their functional problems than the cosmetic outcome.

Key words: Body image, Cosmesis, Pilonidal disease, Surgery

Introduction

Pilonidal disease is most frequently seen in young adults. The peak incidence is between ages 15 and 24. It affects men more frequently than women. Clinical presentation may vary from asymptomatic sinus to acute abscess or chronic disease.[1] Although pilonidal disease is quite common, controversy still exists about the ideal treatment.[2] The ideal operation for pilonidal disease should be simple with a short hospital stay, and a low recurrence rate. There should be minimal pain and wound care, a quick return to normal activity, and finally the treatment should be cost effective. With this in mind, different surgical methods have been suggested. The majority of procedures can be classified into two categories:

1. Excision-open healing methods and
2. Excision with primary closure or reconstructive flap techniques.

The advantage of excision and open healing is a low recurrence rate but the disadvantage is a long wound healing time and extensive wound care. Simple closure after wound excision methods offer the advantage of earlier healing. To avoid complications and recurrences observed following primary closure, flattening of the natal cleft has been recommended.[3] To achieve this goal, various flap rotation and advancement methods are being used.

The most serious and relatively common problems in the treatment are the problems of recurrence or wound-healing.[4] In fact, even if primary outcomes and most important end points of studies addressing patients with pilonidal disease surgery are considered to be wound healing time, surgical site infection, and recurrence until recently, nowadays functional results, as well as quality of life, has gained its place among surgical outcome measures.[5]

Body image is defined as a person's perception of and satisfaction with their own body, and explores patients' attitudes toward their bodily appearance. Cosmesis can be defined as the degree of patients with respect to the physical appearance of the scar.[6] Each type of pilonidal disease surgery has its advantages and disadvantages. So decision about which type of the surgical procedure to select should take into account the desires of the patient as well. However, few data are exist assessing the extent of pilonidal disease and the affect of the type of surgical procedure on the patient's body image or cosmesis.

The aim of this study was to evaluate body image, and cosmetic results in patients undergoing surgery for pilonidal disease with excision and primary midline closure compare to rhomboid excision and Limberg flap procedures.

Material and Methods

Study population

The study population consisted of consecutive patients with a pilonidal disease who underwent surgery in our general surgery department between February 2005 and February 2008. A total of 29 patients were included in the study. Before the start of the study, the local ethics committee approved the study protocol. Written informed consent was obtained from all patients. Patients with acute abscess and those with a history of surgery for pilonidal disease were excluded. Patient characteristics such as duration of symptoms, history of abscess drainage, and body mass index were recorded before surgery. Ten patients were treated with excision and primary midlineclosure, and 19 patients were treated with rhomboid excision and Limberg flap reconstruction. In

those patients surgical procedures was performed depending on the preference of the surgeons. The patients were informed about their operative procedure.

Surgical procedures and postoperative care

All patients were hospitalized for at least one day before the surgery. The procedures were carried out under spinal anesthesia with the patient in a prone or jackknife position.

Excision and primary midline closure

In the primary midline closure method, the sinus and all its tracts were completely excised. The subcutaneous tissue was then approximated with 3–0 vicryl and the skin was closed with interrupted 3–0 ethilon sutures. (Vicryl, Ethicon, Johnson & Johnson, Belgium; and Prolene, Ethicon, NJ, respectively). No drain was used in any of the patients (Fig. 1).

Rhomboid excision and limberg flap reconstruction

A rhomboid-shaped excision was made. A right-sided or left-sided limberg transposition flap, incorporating the gluteal fascia, was fully mobilized on its inferior edge and transposed medially to fill the rhomboid defect. The donor site defect on the gluteal region was closed primarily. The subcutaneous layers were approximated with 2-0 vicryl interrupted sutures over a vacuum drain, and the skin was closed with 3-0 ethilon interrupted sutures. Drain was removed when drainage decreased to ≤ 20 mL/day (Fig. 2).

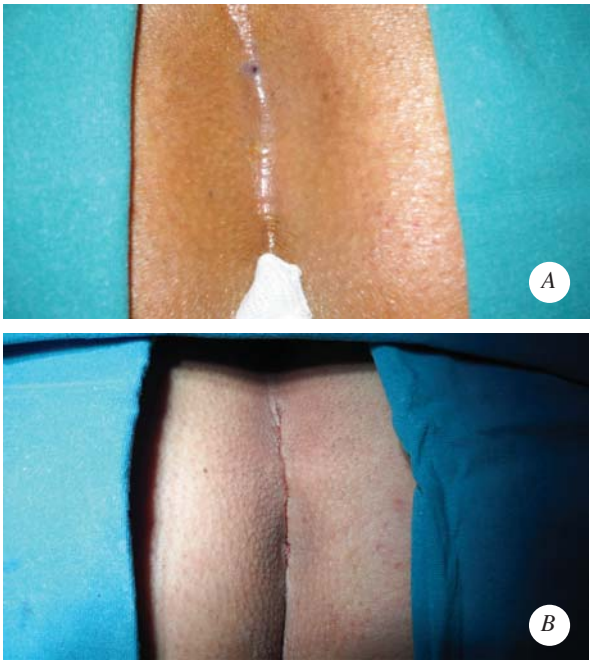

Figure 1. Patient with midline pilonidal pit.
(A) Before operation
(B) Postoperative appearance of natal cleft after primary midline closure

Figure 2. Patient with midline pilonidal pit and a fistula opening in the left cephalad direction.
(A) Before operation
(B) Two weeks postoperatively showing of natal cleft after rhomboid excision and Limberg flap closure

All patients in both groups were followed up on an outpatient basis until the healing was complete. Skin stitches were removed at 2 weeks. All observed complications were recorded.

Body image and cosmesis questionnaire

Body image and cosmesis were evaluated preoperatively, postoperative early and 2 months after surgery with the Body Image Questionnaire. This questionnaire was previously used and tested for ileocolic resection, appendectomy, and donor nephrectomy.[6,8] The body image scale measures patients' perception of and satisfaction with their own body and explores patients' attitudes toward their bodily appearance (BIS, items 1 to 5) The cosmetic scale assesses the degree of satisfaction of patients with respect to the physical appearance of the scar (CS, items 6 to 8). We modified the scoring of the questionnaire by rearranging the scores in which a higher score indicates greater patient satisfaction.

Statistical analysis

All data were collected and analyzed by using SPSS

16.0 for Windows (SPSS Inc, Chicago, IL). Values are reported as the mean ± standard deviation. Categorical data were compared using the Chi-squared test. Continuous data were compared using the Friedman analysis of variance, Mann-Whitney and Wilcoxon Signed-Rank tests. P<0.05 was considered statistically significant.

Results

The study group consisted of 25 men (86.2%) and 4 women (13.8%); the mean age was 27.28±7.97 (range, 16–45) years. Patients' characteristics of both treatment groups at the time of presentation are described in Table 1. No significant difference was observed between the groups in terms of age, sex, and disease presentations. The duration of the operation and length of the hospital stay were significantly shorter for patients who received primary midline closure than those who received rhomboid excision and limberg flap procedure (Table 2). There were no significant differences in the number of early postoperative complications between the two groups.

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BIS and CS scores are described in Table 3. The two treatment groups had similar BIS and CS scores before the surgery. But there was a significant difference between the preoperative and postoperative BIS and CS scores in both groups. The postoperative scores were significantly higher than the preoperative scores (p<0.01) (Table 3). However, there were no significant differences in postoperative BIS and CS scores between the two groups (p>0.05). In both groups at two months after surgery, BIS and CS scores were similar to postoperative early scores and no significant differences were observed between the groups.

Table 1. Patient characteristics.

	Primary midline (n=10)	Rhomboid-Limberg (n=19)	p value
Age, (mean ± SD)	25.10 ± 6.53	28.42 ± 8.57	0.270
Male/female ratio	9/1	16/3	0.667
Duration of symptoms, months, (mean ± SD)	31.00 ± 47.92	15.10 ± 21.14	0.282
Prior abscess drainage (n)	1	6	
Disease presentation			
Pain (n)	5	8	0.684
Pus drainage (n)	9	18	0.632
Simple sinus/ sinus+fistula ratio	9/1	11/8	0.061
Body mass index (kg/m^2), (mean ± SD)	24.74 ± 3.66	24.98 ± 3.33	0.846

Table 2. Clinical outcomes of excision and primary midline closure vs. Rhomboid excision and Limberg flap for pilonidal disease.

	Primary midline (n=10)	Rhomboid-Limberg (n=19)	p value
Duration of operation, minutes, (mean ± SD)	42.00 ± 15.49	64.74 ± 22.39	0.009
Duration of hospital stay, days, (mean ± SD)	1.5 ± 0.71	3.16 ± 1.74	0.008
Postoperative			
Surgical site infection (n)	3	2	0.306
Return to normal activities, days, (mean ± SD)	6.2 ± 4.3	10.2 ± 8.05	0.172

Discussion

Pilonidal disease is a common chronic problem and surgical treatment mostly offers the best chance of cure.[9] Although many surgical methods have been suggested, an ideal method is still open to debate. Thus choosing the treatment options should be based on patient and surgeon preferences. Ideally, surgeons should explain all techniques during the preoperative consultation and inform patients about the advantages and disadvantages of each approach and discuss the desired goals of therapy. Surgery is an art and in conditions where several techniques exist, the operators' individual preference becomes the deciding factor and usually the surgeon decides on behalf of the patients.

Table 3. Scores from the Body Image Questionnaire.

	Body image score (mean±SD)			
	Preoperative	**Postoperative Early**	**Postoperative 2 months**	**p**
Primary midline (n=10)	17.44±1.59	19.44±0.73	19.75±0.71	0.002
Rhomboid-Limberg (n=19)	16.33±4.03	19.00±1.37	19.06±1.43	0.005
p	**0.815**	**0.519**	**0.110**	
	Cosmesis score (mean±SD)			
	Preoperative	**Postoperative Early**	**Postoperative 2 months**	**p**
Primary midline (n=10)	7.33±2.74	15.22±4.02	17.75±3.81	0.002
Rhomboid-Limberg (n=19)	10.11±4.30	15.94±5.01	15.56±5.95	0.007
p	**0.120**	**0.745**	**0.503**	

In contrast to cosmetic surgery, body image and cosmesis are unconventional outcomes in the field of general surgery. Improvement or maintenance of body image and cosmesis are often mentioned only as additional benefits.[10] For patients, however, these 'additional' advantages are long-lasting and important, and may even be more important than the commonly addressed short-term outcomes.

Many surgeons treat pilonidal disease by wide excision of the pilonidal complex-containing tissue, leaving a lay open or a primary sutured midline wound.[11,12] Other surgeons use more sophisticated flap techniques designed to keep the incision away from the midline or flatten the natal cleft.[13,14] One of the most commonly practiced flap technique is Limberg flap.[15] Flap procedure involves excision of the diseased tissue and attempt to change the contour of the natal cleft. A major disadvantage of the Limberg flap is that it leaves an unsightly scar across the midline. The scar can be sited over the midline or displaced laterally. In addition this technique is associated with natal cleft distortion resulting in an asymmetry of the gluteal contour.[16]

Some authors believe that primary closure is more comfortable in small defects.[17] In addition, general consensus also supports that midline primary closure of the wound is more cosmetically acceptable for patients.[18] But the results of our study dose note support this assumption. Body image and cosmesis was not affected by the surgical approach in our study. The postoperative body image and cosmesis scores were significantly higher than the preoperative scores in both groups. After surgical correction all patients reported significant positive postoperative changes. However no significant difference in terms of body image and cosmesis was found between patients who underwent primary midline closure compared to those who underwent the Limpberg flap procedure.

This observation is interesting because it suggests that patients who have suffered pilonidal disease are far more concerned about the reconstruction of their functional problems due to their chronic disease over the cosmetic ones. Furthermore, the viewpoints and priorities of patients may not be the same as their surgeons. Few data exist about patient satisfaction according to type of surgical procedure and evaluate cosmesis using objective methods for pilonidal disease. Most studies do not discuss this issue. The importance of cosmetic outcome was evaluated only a few studies. Karakayalı *et al.*[19] reported a small but statistically significant preference for off-midline closure than for midline closure, where satisfaction was measured by using a 0-10 visual analogue scale. Interestingly, Holmebakk *et al.*[20] reported postoperative cosmetic result was satisfactory only in 42% of patients; the result was poor in 30% of patients. According to this study women were more concerned about the cosmetic outcome and rhomboid plasty resulted

in worst (median VAS-score three) cosmetic outcomes. Our results showed that primary closure had no advantage for body image and cosmesis over rhomboid. But, prospective studies using different tools with a larger sample size are needed. In conclusion, although limited by a relatively small sample size, our study showed that body image and cosmesis were not affected by the surgical approach. Patients' main concern is the functional outcome rather than the cosmetic one. Patients should be informed about the cosmetic outcome before surgery. Difference in cosmetic alterations between surgical approaches can be useful information for patients who undergo pilonidal disaease surgery.

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