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STUDY OF COMPLICATIONS AND PATIENT SATISFACTION OF PILONIDAL DISEASE PATIENTS WITH TIE OVER SURGERY VERSUS OPEN SURGICAL TECHNIQUE IN THE RAZI HOSPITAL IN 2010

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Abstract

Background and Objective: Pilonidal disease is defined as sinus containing hairs in the area of inter gluteal cleft. Although this disease has low prevalence of mortality, the disease itself can cause disability and absence from classes of school. It can be in the forms of simple cyst, abscess, acute or chronic sinus. Therefore its treatment is variable from taking consideration and hair removal to abscess drainage, incision, and removal of the sinus. Although there are several surgical techniques for the treatment of pilonidal sinus, the best method of treatment is not determined yet. The surgery should be simple, short hospitalization; short time to return to work and less recurrence. Several studies have examined various aspects of open and closed methods, but the main focus of this study was to evaluate patient satisfaction from Tie over method rather than open method.

Materials and Methods: In the present research, from 100 patients with Pilonidal sinus, 50 patients were treated with surgery using Tie over method while 50 patients were treated by open method and they were followed up for 6 months. In the study, in patients treated with Tie over surgery, the lesion was removed altogether to the presacral fascia after spinal anesthesia using oval incision at the sinus and then after complete control of wound hemostasis, thickness of f & n was closed completely with appropriate pressure by Nylon suture. While in order to make appropriate pressure, only one gas pipe was placed on each side of wound, on the skin and under the f & n suture scars. During the ten days for drying sweat and not soaking the wound, it was dried with a hair dryer and after that sutures and gases were removed. In patients treated with open surgery method, the lesion was removed altogether to the presacral fascia after spinal anesthesia using oval incision at the sinus and after complete control of wound hemostasis, it was left open. For patients who referred to the hospital after the surgery, a questionnaire was completed and patient's satisfaction from the surgery was evaluated based on their responses.

Results: The average age of studied patients was 26.6 years and male to female ratio of them was 1.85. Bleeding at place was observed in 1 subject of Tie over group and 2 subjects of the open group and there was no significant difference. Infection at the location of surgery was observed in 1 subject of Tie over group and 1 subject of open group that there was no significant difference. Relapse within 6 months of follow-up was observed in 1 subject of Tie over group and 1 subject of open group that there was no significant difference. The average time for return to work in Tie over group was less than open group. Postoperative pain was evaluated using the VAS scale two hours after spinal anesthesia that was higher in Tie over group than the open significantly.

Acceptance of close people for caring the operation place in Tie over group was more than the open group. Patient satisfaction with surgical technique in the Tie over was more than the Open Group.

Conclusion: Based on the results of this study about sooner returning of patients to the work and their higher satisfaction using Tie over method for pilonidal sinus surgery, it seems that this procedure is suitable for Pilonidal disease.

Keywords: Tie over method, Open method, Pilonidal disease, Patient satisfaction.

Introduction

Pilonidal cyst or pilonidal sinus is a small bag of skin containing hair in the lower colorant back in the inter gluteal cleft (1). Although the mortality rate of this disease is not high, the disease itself and its treatment are the causes of disability (2). This cyst appears as a skin pore, and sometimes it is not more complicated than a niche containing few hairs. However, in extreme conditions, pilonidal disease appears in the form of an abscess or acute sinus drainage in the sacrococcyx area (3). Acute onset of disease can be in the forms of a painful abscess or an evacuating infected sinus that can be treated by local anesthesia as an outpatient procedure (3).

Therefore, its treatment is variable from consideration and removal of hair to abscess incision and drainage and removal of sinus (2). A more definitive method for recurrent infections is surgery (4). This disease is a chronic acquisitive disease, while theories of its congenital prevalence have also been proposed including (5): remnants of the medullary canal, coverage of skin by subcutaneous (Dermal inclusion), and the remains of the gonads. The risk factors for the disease include trauma, obesity, driving, cause folliculitis or boils in other parts of the body and a family history of pilonidal sinus (6).

Pilonidal cysts are normally seen in young patients. Although both sexes are affected, the disease is more common in men. Cyst infection usually begins in early adulthood (18-40 years) and statistically every 100 thousand 26 people are

infected (3, 4). Mayo Herbert in 1833 described the disease quotes for the first time (2). It seems that the first case of the disease has been recorded by AW Anderson in 1847 under the title of "hair out of the wound" at Boston Medical Surgical Journal. In 1880, Hodges used the word of Pilonidal sinus for describing this disease. Buie called this disease as Jeep disease because of its prevalence in tank, truck and jeep drivers (5). Carcinoma originating from the pilonidal sinus is a rare so that from 1900 to 1994, 44 cases have been reported that its 39 cases were SCC, 3 cases were BCC, one case was adenocarcinoma, and one was non-specific adenocarcinoma. The average duration of disease was 23 years from pilonidal to the onset of carcinoma and its age of onset was 50 years. This disease has metastasis to the inguinal lymph nodes and treatment of wide local excision is associated with removal of presacral fascia is (5). Carcinoma originating from the pilonidal sinus is rare so that from 1900 to 1994, 44 cases have been reported from which there were 39 cases of SCC, 3 cases of BCC, 1 case of adenocarcinoma, and 1 case of non-specific carcinoma. Pilonidal average period until the emergence of carcinoma was 23 years and its appearance age was 50 years. This disorder has metastasis to the inguinal lymph node. Wide local excision is treated with the presacral fascia (5). Any acute abscess in the sacral area, purulent Hydradnit, and also crypto-glandular abscess may appear as pilonidal disorder. An accurate and passing rectal probe from the leaflets (preferably in the operating room) helps to reject the mentioned points. IBD can also appear as pilonidal disease that proctoscopy helps to reject it. Actinomycosis, tuberculosis, syphilis and sacral osteomyelitis also may appear as pilonidal disease (6). Selecting the treatment method is based on the complexity of the sinuses, cost, recovery time, and recurrence rates. Comfort feeling of patient and also the period of deprivation from work are also important factors. Although there are many surgical techniques for the treatment of pilonidal sinus, the best method of treatment is not clear. Although several non-invasive techniques have been developed for the treatment of various diseases and cancers, surgery is the gold standard option for most of life-threatening diseases.

The best surgery method should have some characteristics including short hospitalization period, short recovery time, short returning to work, and fewer relapses (3). Some surgeons use incision and cortege as the easiest approach to wound healing between 4 to 7 weeks and recurrence rates of 10 to 20 percent. The most common method is excision that is performed without closure of wound and healing between 8 to 21 weeks and recurrence rate of 2 to 3% (15). Alternatively, excision and primary closure that has high recurrence rate (11 to 29 percent), and wound healing between 2 and 7 weeks (3). Other techniques such as marsupialization, Bascom procedure, Limberg flap, or Karydakis are also performed for treatment of pilonidal sinus (5). Non-surgical treatments such as injections of

phenol, fibrin throat, cryotherapy, laser cauterization have also been used (2). Several studies have examined various aspects of open and closed methods (16, 17); however the main focus of this study was to evaluate patient satisfaction Tie over the open procedure.

Materials and Methods

This study was performed as clinical trial on patients referred to Razi hospital (Iran) with Pilonidal disease and was scheduled for surgery. Sampling Method was Randomized Sampling (SRS) and the required sample volume due to similar studies and using the formula was calculated as the sample size for statistical comparison with $\alpha= 0.05$ and $\beta= 0.2$ for groups including 50 samples in Tie over group and 50 samples in open group and then individuals with acute and recurrent infections were excluded.

In this study, patients treated with operation and Tie over method after spinal anesthesia, and putting the patient in the lying on the abdomen status, the operation place was cleaned using betadine, and it was covered appropriately with sterile. This procedure was followed by removal of pre-sacral fascia using oval incision at the sinus lesion altogether so that cauterization and fascia injury should be avoided.

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all patients were informed about the surgery using both methods and written consent was obtained from patients.

Patient at every stage of research that refused to participate, were excluded freely and someone else was given the sample size in the study. Research started after approval of ethics committee and proposal after receiving the license, and all patient records will remain confidential and will only be used for scientific studies. After collecting, data was analyzed in SPSS software and statistical tests of T-test, chi-square (Chi square).

Results

Several cases were investigated during the test. Cases that showed statistically significant differences in the comparison between the two groups included the possibility of drying or cleaning the operation site (p= 0.001) (Figure 1), the proper conducting religious practice (P= 0.0001) (Figure 2), the appropriateness of the cost of caring operation place (p = 0.0001) (Figure 3), the appropriateness of the time needed to care for surgery (p = 0.0004) (Figure 4), mean time to return to work (p = 0.0001) (Figure 5), medium scale pain (p = 0.03) (Figure 6), accepting community for crowds care act (p= 0) (Figure 7), and patient satisfaction of the procedure (p= 0) (Figure 8).

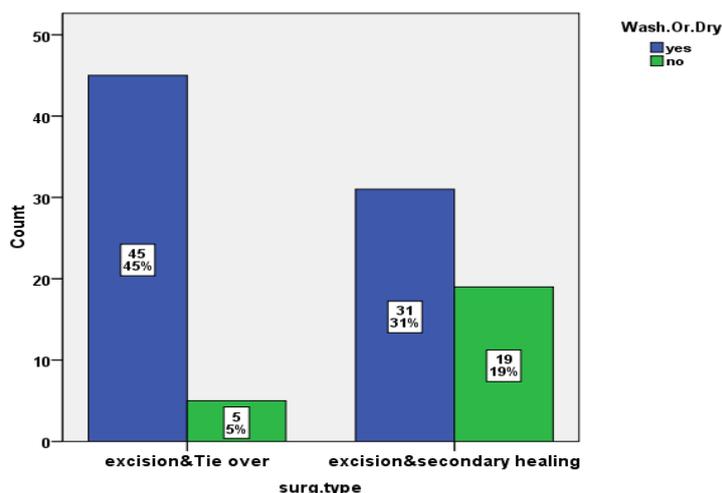


Figure-1. Comparison of the possibility of drying or cleaning sort of action.

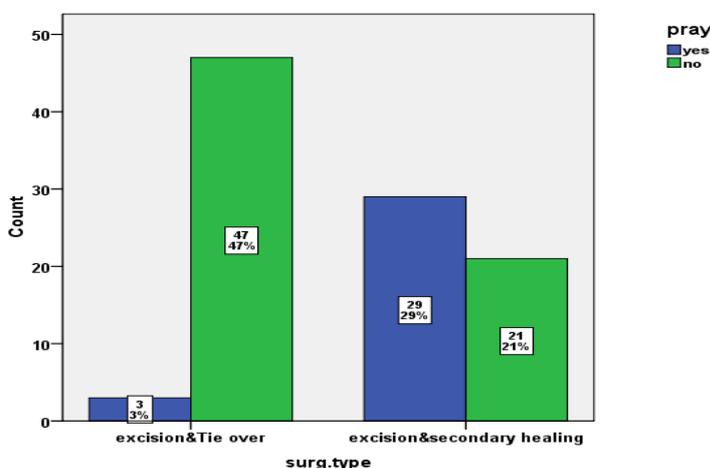


Figure-2. Comparison of the proper conduct religious practice in two groups.

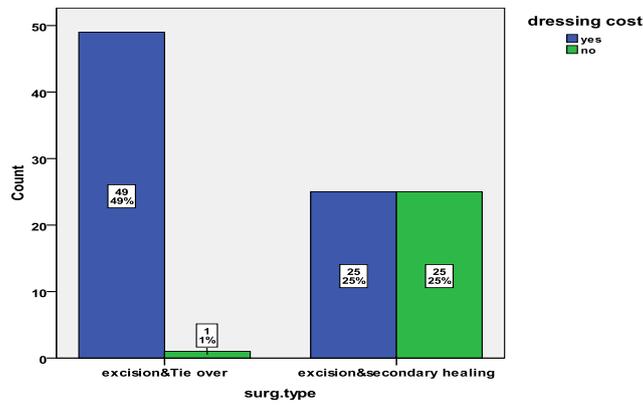


Figure-3. Comparison appropriate place in group care costs.

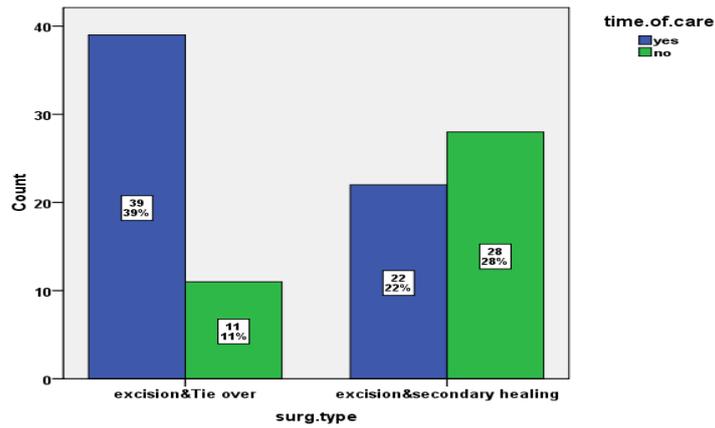


Figure-4. Graph comparing the suitability of the time needed to care for crowds operation in both groups.

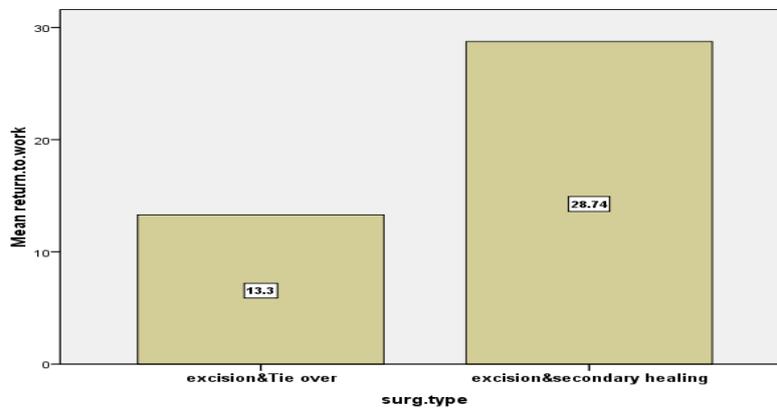


Figure-5. Comparison of the two groups used the time to return.

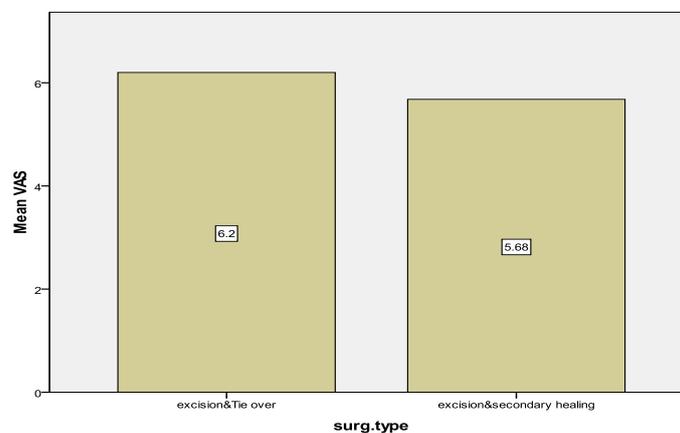


Figure-6. Comparing the two groups in pain scale.

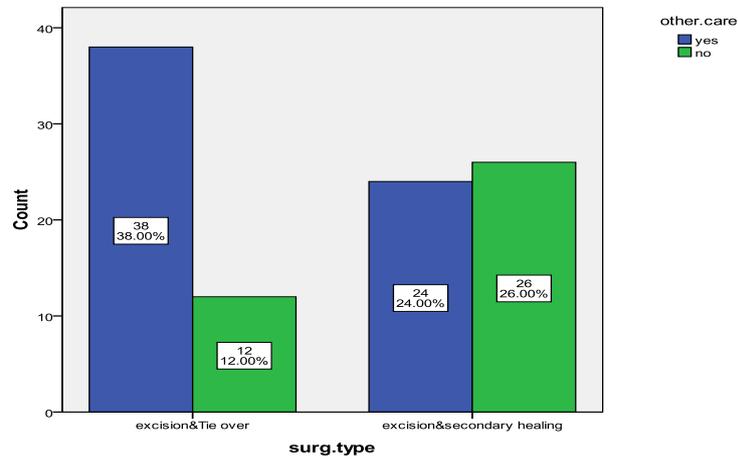


Figure-7. Compare accepting community for wound care patients in both groups.

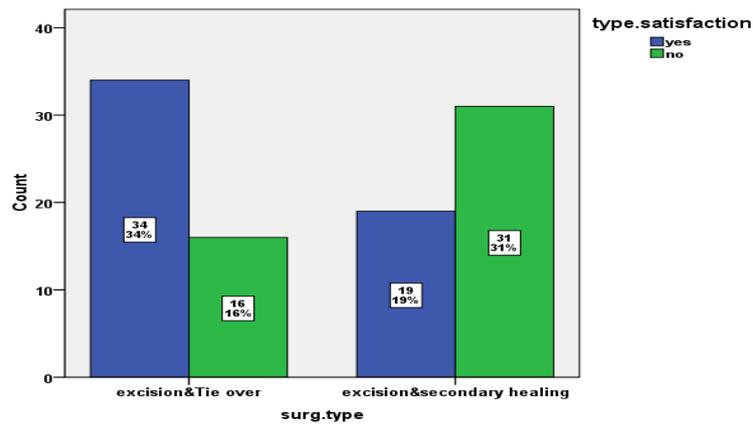


Figure-8. Graph comparing patient satisfaction with surgery in two groups.

Additionally cases that showed no statistically significant differences the comparison between the two groups included comparing the average age ($p= 0.27$) (Figure 9), the sex ratio ($p= 0.53$) (Figure 10), unpleasant smell at surgical site (Figure 11) ($p= 0.01$), allowing regular visits to the doctor ($p= 0.81$) (Figure 12), bleeding at operation site ($P = 0.62$) (Figure 13), surgical site infection ($p= 1$) (Figure 14), and relapse ($p= 0.558$) (Figure 15).

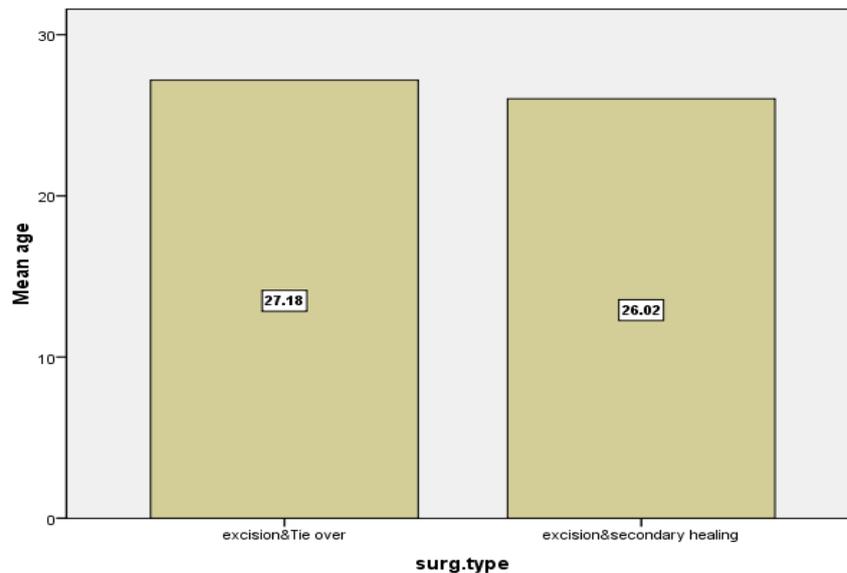


Figure-9. Compares the average age in both groups.

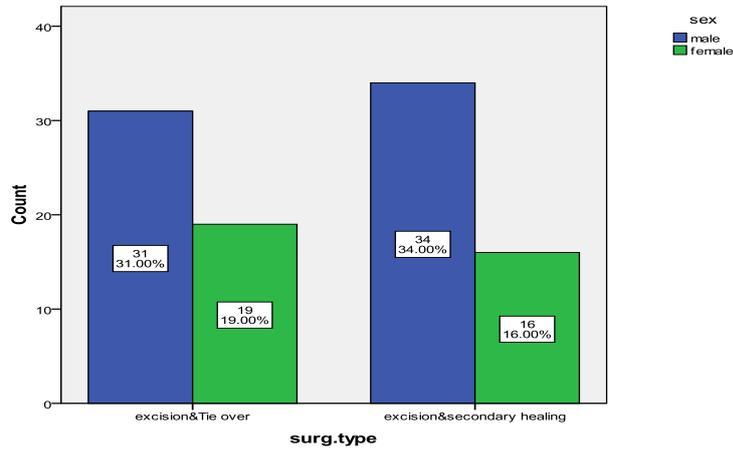


Figure-10. Compare the sex ratio of the two groups.

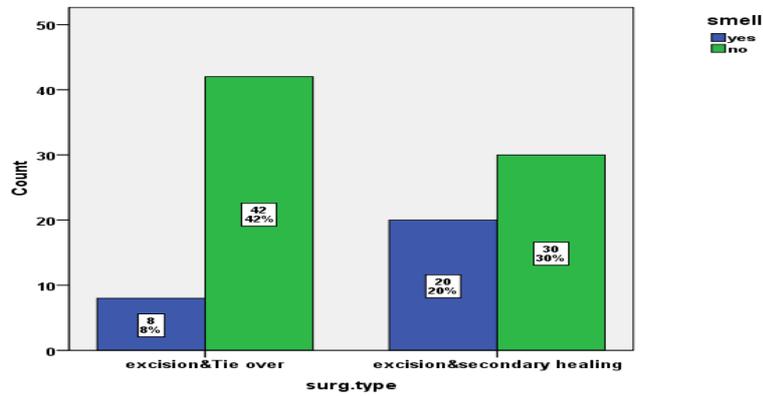


Figure-11. Comparison of the unpleasant smell of the surgical site for people in both groups.

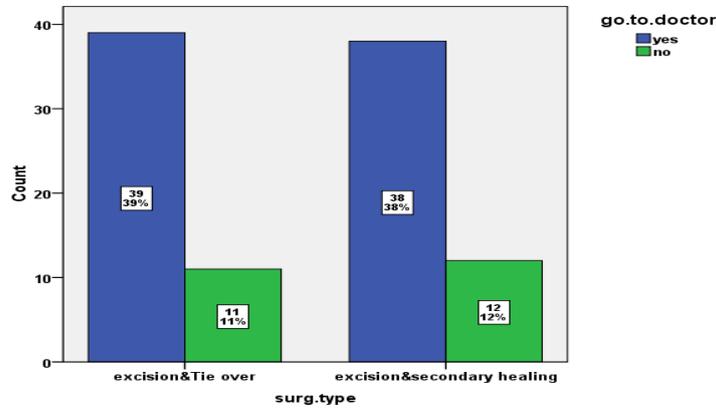


Figure 12. Compare the features of regular visits to the doctor in two groups.

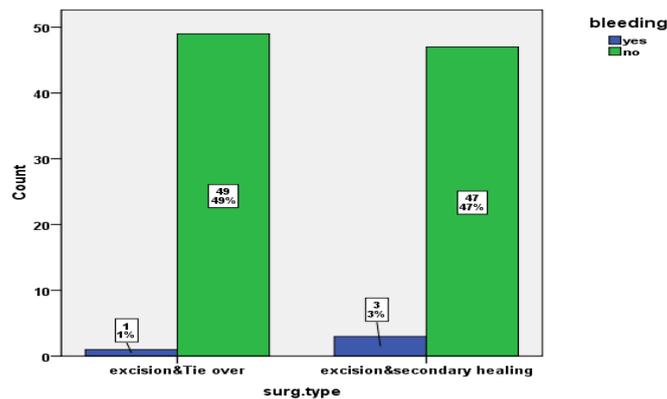


Figure-13. Comparison bleeding in group

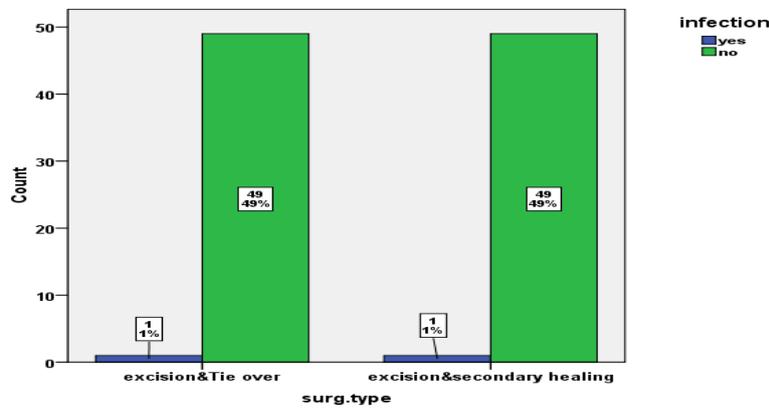


Figure-14. Comparison of surgical site infection between the two groups.

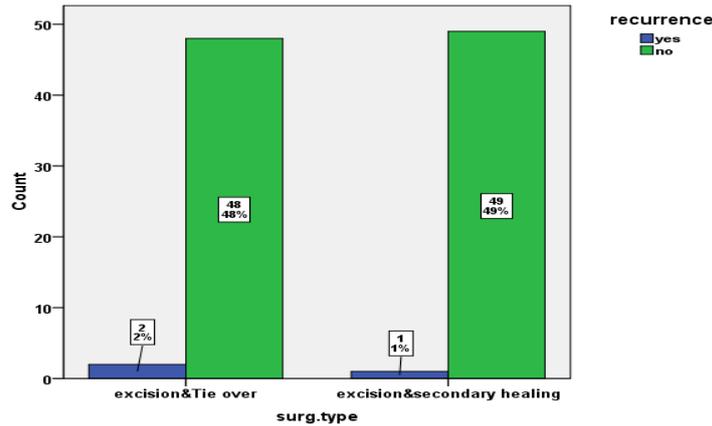


Figure-15. Comparison of recurrence between the two groups.

Discussion

In this study, 100 patients were studied in two groups including 50 subjects in Tie over group and 50 subjects who were treated by excision pilonidal sinus surgery and open method. The average age of patients in Tie over group was 27.17 years and it was 26.2 in the open group. The ratio of men to women in the Tie over group was 1.6 and it was 2.1 in open group of patients under study in male to female ratio was 1.85 that in similar studies it was 2 (4).

Studying the responses of patients to the questions, there was significant difference between two groups in terms of the possibility of regular rinsing or drying the wound at home, return time and time off work, done properly religious practice, practice care costs crowds, the time needed to care for crowds of action, accepting people care for crowds practice and patient satisfaction surgical procedure in the two groups was statistically significant difference (p-value> 0.05). However, answers of the patients on regular visiting the doctor, and the smell at the operation site did not show a statistically significant difference (p-value <0.05). Of course the smell at operation site in Tie over group was because it does not dry the wound with a hairdryer when it was asked more accurately. The bleeding at operation site in Tie over group was observed in 1 subject and it was in 2 subjects of open group, while there was no statistically significant difference. Similar results have been seen in similar studies (4). Wound infections were found in one

person of Tie over group and one patient of the open group that it was also statistically significant differences. Similar results were seen in similar studies (18). The average time of return to work used in the Tie over was 13.02 and 40.60 days in open group, which was statistically significant. In a study conducted Ertan (2005), time of return used in closed group was 28.5 while it was 15.8 days in open group (18). Postoperative pain was measured using the VAS scale two hours after spinal anesthesia in Tie over group and its average was 6.2 (the highest score was 10) while in the open group the average period was 7.5 days (10) and statistically the difference was significant. Similar results were observed in similar studies (19). Relapse within six months of follow-up was observed in 1 subject of Tie over group and in 1 subject of open group and there was also statistically significant difference. Relapse was significantly less in the open group (4). Acceptance of close people in Tie over group was 76% and in the open group it was 48% and had a statistically significant difference. Patient satisfaction in surgery group using Tie was over 68% and it was 38% in the open group, in which difference was statistically significant. In other studies also patient satisfaction with surgery in Tie group was over than 59.7% (16).

Conclusion

Considering the results of this study based on the patients return to work and satisfaction of patients using Tie over method for pilonidal sinus surgery, it seems that this procedure is suitable for Pilonidal disease.

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