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Pilonidal Sinus, Minimal Excision and Simple Direct Closure Versus Wide Local Excision and Flap Reconstruction

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Abstract

A pilonidal sinus is a sinus that contains hair, primarily in the sacrococcygeal region, due to preferring conditions like: The presence of a profound natal split and the presence of hair inside the separated, perspiring, maceration, bacterial tainting, and entrance of hair. The point of this examination was to analyze between the results of insignificant extraction of pilonidal sinus lot with basic direct conclusion versus wide extraction with rotational rhomboid fold conclusion. This investigation included 50 patients experiencing 1ry non intermittent sacrococcygeal pilonidal sinus. They were arbitrarily partitioned into 2 gatherings. The primary gathering (25 patients) was exposed to negligible extraction of the pilonidal sinus plot and straightforward direct conclusion while patients of the subsequent gathering (25 patients) were exposed to wide neighborhood extraction and rotational rhomboid fold reproduction. there were no critical contrasts among the two gatherings as for age or sex conveyance. Likewise no critical distinction in contamination, seroma, disturbance and repeat rates yet insignificant extraction of the pilonidal sinus parcel and straightforward direct conclusion was altogether more limited in usable time, Post-employable clinic stay, recuperating time and early re-visitation of work. The natal separated in the rhomboid fold gathering can be leveled, and tissue can be approximated without strain. rhomboid fold procedure in pilonidal sinus medical procedure almost equivalent in the vast majority of static's to insignificant extraction of the pilonidal sinus plot and basic direct conclusion in1ry non repetitive sacrococcygeal pilonidal sinus**.**

Keywords: Pilonidal,Sinus, Excision, Flap, Reconstruction.

1. Introduction

In 1833, Herbert Mayo depicted a hair-containing sinus, however it was not until 1880 that Hodge recommended the expression "pilonidal" (Latin: pilus = hair and nidus = home) [1].

By definition, a pilonidal sinus is a sinus that contains hair, mostly in the sacrococcygeal territory, due to preferring conditions like: The presence of a profound natal parted and the presence of hair inside the split, perspiring, maceration, bacterial pollution, and entrance of hair [2].

The inception of pilonidal illness isn't completely perceived. There are two hypotheses related with its pathogenesis: the procured and the innate speculations. Nonetheless, most of assessment favors the gained hypothesis, which proposes that the sacrococcygeal pilonidal disease begins in a natal separated hair follicle that has gotten expanded with keratin [3].

Akinci expressed that the occurrence pace of pilonidal infection is around 0.7%, male are influenced 2.2-multiple times more much of the time than female [4].

Various procedures have been depicted for treatment of pilonidal sinus like phenol infusion, cryosurgery, diathermy coagulation, straightforward cut and seepage and Excision either without stitch or joined with one of a few techniques for essential conclusion is a significant option [5].

Skin folds have likewise been depicted to cover the sacral imperfection after wide extraction. This keeps the scar off the midline and smoothes the natal split [6].

In spite of the debate about the best careful procedure for the treatment of pilonidal sinus, yet there is an agreement around the ideal activity which ought to be basic, ought not need a delayed clinic stay, ought to have a low repeat rate, and ought to be related with insignificant torment and wound consideration, and abatement patients' time off work [2].

The point of this examination was to look at between the results of negligible extraction of pilonidal sinus lot with straightforward direct conclusion versus wide extraction with rotational rhomboid fold conclusion.

2. Patients and methods

This examination was performed on 50 back to back patients experiencing 1ry non-intermittent sacrococcygeal pilonidal sinus; tasks for all patients were done at Benha University Hospital, Patients were arbitrarily isolated into two gatherings:

Gathering (A): included 25 patients treated by negligible extraction of the pilonidal sinus parcel and straightforward direct conclusion.

Gathering (B): included 25 patients treated by wide neighborhood extraction and rotational rhomboid fold remaking

Prior to medical procedure, a structure was readied, and patients age, sex, span of indications, preoperative anti-toxin use, past therapies, length of emergency clinic stay, get back to work, complexities like injury disrubtion, seroma, disease and repeat were noted.

All patients were conceded to clinic the day preceding a medical procedure and worked under broad sedation. The natal separated was shaved the day preceding the medical procedure. The patients were put in horizontal situation on the surgical table with the legs marginally kidnapped and the bottom tied separated by glue tapes on the table.

Shut attractions channels were set in expected space taking all things together patients independent of strategy utilized and eliminated when seepage diminished to 20 mL/d. Patients were seen regularly on the careful ward on postoperative days 5, 10, and 14 for wound review and expulsion of stitches.

The patients with delayed mending were kept on being seen in careful ward until complete recuperating or

epitalization was accomplished. Wound complexities were recorded.

A quarter of a year after medical procedure, patients were welcome to the clinic for follow-up. Time to get back to work and time to finish recuperating were recorded.

Methylene blue was infused into the sinus openings not long before the cut is set utilizing a 5 ml needle associated with a 22 French canula.

All patients got a solitary intravenous portion of cefoperazone at season of acceptance of sedation and 12 hour postoperative and afterward moved to metronidazole case (500 mg) three times each day for 7 days.

2.1Statistical methods

Data management and statistical analysis were done using SPSS vs.25. (IBM, Armonk, New York, United States). Numerical data were summarized as means and standard deviations. Categorical data were summarized as numbers and percentages. Comparisons between both groups were done using the independent t-test for numerical data. Categorical data were compared using the Chi-square test or Fisher's exact test if appropriate. Kaplan-Meier curve was done for time to recurrence in both groups. The log-rank test was used for comparison. All P values were two-sided. P values less than 0.05 were considered significant.

3. Results

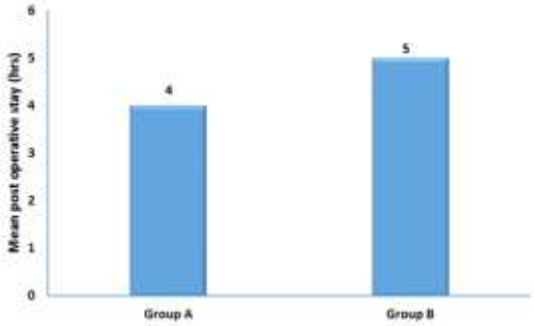
There were no significant differences between both genders as regard age & gender. P values were 0.783 & 0.48, respectively Table(1).

Table (1) Demographic characteristics in both groups

		Group A (n = 25)	Group B (n = 25)	P value
Age (years)	Mean ±SD	24 ±6	24 ±9	0.783
Gender	Males	19 (76.0)	21 (84.0)	0.48
	Females	6 (24.0)	4 (16.0)	

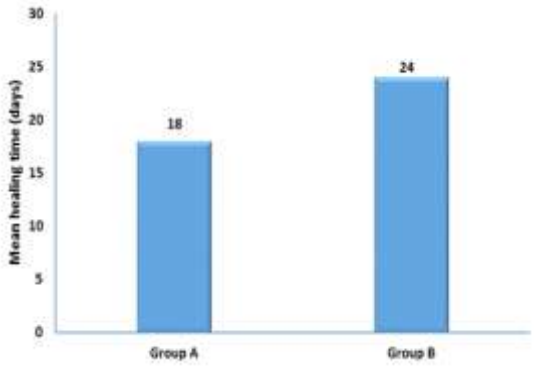
The Independent t-test was used for age. Chi-square test was used for gender Mean operative time was significantly higher in group B (35 minutes) than group A (27 minutes). P-value was <0.001

The mean post-operative hospital stay was significantly higher in group B (5 hrs) than group A (4hrs). P-value was 0.013 fig (1).



Fig(1) Post-operative hospital stay in both groups**.**

Mean healing time was significantly higher in group B (24 days) than group A (18 days). P-value was 0.002. fig(2)



Fig(2) Healing time in both groups

There was no significant difference between both groups as regard seroma. P-value was fig (3)

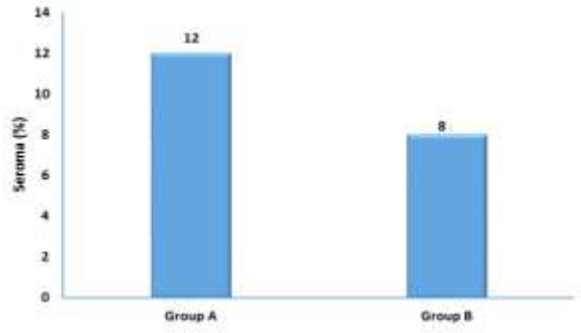


Fig (3) Frequency of seroma in both groups

There was no significant difference between both groups as regard infection. P-value was 1 There was no significant difference between both groups as regard disruption. P-value was 0.189

There was no significant difference between both groups as regard recurrence. P-value was 1 Time to return work was significantly higher in group B (32 days) than group A (24 days). P-value was 0.001Fig (4)**.**

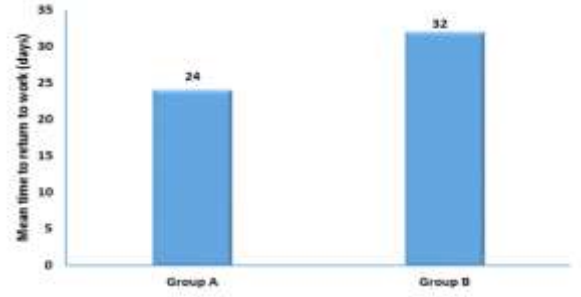


Fig (4) Time to return work in both groups

Kaplan-Meier curve for time to recurrence in both group: There was no significant difference between both groups as regard time to recurrence. Log-rank P-value was 0.999, Fig(5).

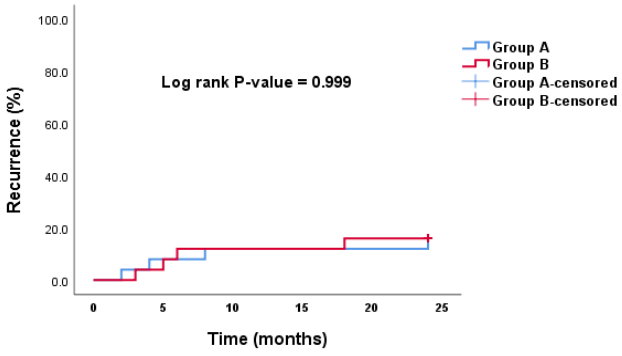


Fig (5) Kaplan – Meier curve for time to recurrence in both groups

3. Discussion

In the current examination, the interim of usable span in insignificant extraction of the pilonidal sinus lot and basic direct conclusion is [27 minutes]. Marginally longer usable time was recorded by [7] [28.5 minutes] and longest time was recorded by [8] [38minutes].

As respect, the interim of employable span in extraction and rhomboid fold is [35 minutes]. Longer usable length [75 minutes] was recorded by[9] and longest [120 minutes] was recorded by [10].

As respect, the interim of clinic stay in rhomboid extraction and rhomboid fold recorded in our investigation was [5 hours]. Comparative mean medical clinic stay span

was recorded by[11]. Longer medical clinic stay was recorded by [2] [2.9 days].

Complete injury recuperating was accomplished in 68% of our patients treated by extraction and direct conclusion after mean time of 18±5 days with a normal of 24±7 days off work. 32% of patients created wound entanglements [seroma (16%), contamination (12%) and disturbance (4%)] that required waste of the injury and continued dressing.

Equivalent outcomes uncovered that 20% of patients created wound complexities [seroma (10%), contamination (6.6%) and disturbance (3.3%)] by [8]. Then again, activities from 2013 through 2016 were reflectively evaluated by [12], Wound entanglements were as incessant after negligible extraction and essential conclusion method (39%) as 4% seroma, 15% shallow injury disease, 17% injury gapping and 3% profound injury contamination with interruption. The assessed long term repeat rate was 4%.

As respect, Complete injury mending was accomplished in 60 % of our patients treated by rhomboid extraction and Limberg fold after mean time of 24±7 days with a normal of 32±9 days off work. 40 % of patients created wound inconveniences [2 patients created seroma, 3 patients created wound contamination and 5 patients created wound disruption].

M. G. Muzi, [11] announced that incomplete disturbance of the careful injury happened in 1.4% of patients and wound seroma happened in 2.9 % of patients, [9] revealed that 13% of patients created seroma, 6.5% of patients created wound contaminations and 6.5% of patients created wound dehiscence.

In the current examination, 16% of patients created post employable repeat in our patients treated by insignificant extraction of the pilonidal sinus plot and basic direct conclusion. A high ecurrence rate (48%) was recorded by [13]. Then again [8] have recorded lower repeat rates (3.3 %).

As respect, 16% of patients created postoperative repeat in our patients treated by rhomboid extraction and Limberg fold. Yet, [2] recorded lower recrruence rate (5%). Anyway [14] recorded 7.7% repeat rate.

In the current examination, Rhomboid extraction and Limberg fold technique has been accounted for to have no huge distinction in contamination, seroma, interruption and repeat rates however negligible extraction of the pilonidal sinus parcel and basic direct conclusion was altogether more limited in usable time, Post-employable clinic stay, recuperating time and early re-visitation of work. The natal parted in the rhomboid fold gathering can be leveled, and tissue can be approximated without pressure. This distinction didn't arrive at measurable importance due to the generally modest number of patients. This distinction arrives at measurable irrelevance as ($P > 0.05$ for all correlations).

In contrasting and our outcomes, [7] have contemplated 100 patients with persistent pilonidal sinus sickness whom were randomized to get careful therapy in the types of one or the other extraction with essential conclusion or rhomboid fold strategy. Each gathering was made out of 50 patients. Mean follow-up was 19 months. There was a huge distinction between the gatherings as far as length of medical clinic stay ($P=.005$), time to finish recuperating ($P<.001$), time off work ($P<.001$), wound contamination rate ($P=.03$) and agony (54.5+/ - 14.0 versus 67.5+/ - 18.4; $P<.001$). More limited emergency clinic stay, prior mending, more limited time off work, lower proportion of difficulties, lower torment insight, and improved general wellbeing discernment are the primary benefits of the rhomboid fold strategy in pilonidal sinus medical procedure. All together, these boundaries add to patient solace and fulfillment after careful treatment.

Likewise, [15] reasoned that rhomboid extraction and Limberg fold system can be performed for overseeing essential or repetitive pilonidal sinus with a low inconvenience rate, short emergency clinic stay (3.7 hours), brief timeframe to get back to typical movement (5 days), low repeat proportion (4.9%) and great long haul results.

Additionally, huge weaknesses in regards to postoperative disease rate, activation time, release from emergency clinic, and time off work were noted for essential conclusion, contrasted and rhomboid fold recreation. Following a middle subsequent time of 4.2 years, repeat rate (17.9%) created in the essential conclusion gathering and (7.5%) in the rhomboid fold gathering. Along these lines, the repeat rate in the rhomboid fold was not found to vary altogether from that in the essential conclusion gathering ($P = 0.126$) [16].

4.Conclusion

We reason that rhomboid fold strategy in pilonidal sinus medical procedure almost equivalent in the greater part of static's to negligible extraction of the pilonidal sinus plot and straightforward direct conclusion in1ry non intermittent sacrococcygeal pilonidal sinus.

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