Comparative Study in Surgical Management of the Pilonidal Sinus Disease

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Abstract

The objective: the current study conducted to assessment the recurrence rate of Pilonidal sinus.

Materials & Methods: This retrospective study that shows all the cases of Pilonidal sinus treated in the Khanaqin General Hospital and Jalawla General Hospital at period between April 2016 to September of 2019. The number of patients is 200, including 48 women and 152 men, with ages ranging from 19 to 50 years.

Results: 200 Pilonidal sinus patients were participated in this current study. The recurrence rate after surgery reached 13(6.5%) from all patients. The patients who used in present study include male 152(76%) and female 48(24%). According to Chronicity, the present results demonstrate 73 (36.5%) cases as acute disease and 127 (63.5%) as chronic disease. 79 patients who suffering from acute disease were lay open and collection drainage. On the other hand, 121 patients who were suffering from chronic disease treated with sinus excisional procedures and primary midline closure.

Keywords*: Recurrence rate; Pilonidal sinus; Primary midline closure; Lay open.*

Introduction

The pilonidal sinus PS is a disease that effect generally of young males [1-2]. Although pilonidal sinus is harmless in most cases, pilonidal sinus may strictly weak the ability of patient to perform his work and life quality, especially if the process of wound healing was delayed. Furthermore, the disease recurrence was noted and reported in about 30% of patients [3-4]. The disease of pilonidal sinus include loose of hair and perineal flora. The major risk factors of disease of pilonidal sinus involve male sex (Pilonidal sinus appear more in young men), the occupations that needed sitting for long times, deep natal cleft existence and hair presence inside natal cleft. The family history is noted in 38% of patients [5-6]. It is commonly located in sacrococcygeal region, but also located in other positions like the umbilicus, axilla, on foot sole, penis, and clitoris and in anal canal [7]. Pilonidal sinus treatment depends on giagnosis. Intervention could extend from incision toexcision with reconstructive procedures. The treatment of pilonidal sinus is generally surgical [8-9]. Various surgical treatments were described to pilonidal sinus, inclusive flap surgery [10-11]. The perfect operation to this disorder must be successfully eradicate the pilonidal sinus, minimize recurrence risk and carry a low morbidity rate [12].

Materials & Methods

This retrospective study shows all rudimentary cases of pilonidal sinus that were treated in the Khanaqin General Hospital and Jalawla General Hospital at period between April 2016 to September of 2019. The number of patients is 200, including 48 women and 152 men, with ages ranging from 19 to 50 years. The data of present work include some socio-demographic properties of patients, recurrence rate, clinical presentation, and clinical management. The pilonidal sinus patients were diagnosed with recurrence via clinic follow-up for patients if the following feature developed after surgery that including: complete wound healing process after surgery, no trauma development during the healing of wound, present one tough criterion (surgical re-intervention, new sinus forming, pus discharge and hair

developed in the sinus and) or two soft criteria (pain, redness the wound, swelling). The technique of surgery as report could be either by lay open technique or by the primary midline closure technique. Technique called Lay open is vast pilonidal sinus excision and secondary intention was occur to wound healing. The second technique was primary midline closure of pilonidal sinus excision. The analysis of outcomes was done by using statistic program known as SPSS (version 22). The data of current study were expressed as frequencies and percentages with several of results presented in tables; Chi-Square test was utilized to measure statistical significance differences. Cross-tabulations were done to compare the relationship between recurrence and other variables.

Results

200 Pilonidal sinus patients were participated in this current study. The recurrence rate after surgery reached 13(6.5%) from all patients. The patients who used in present study include male 152(76%) and female 48(24%). According to Chronicity, the present results demonstrate 73 (36.5%) cases as acute disease and 127 (63.5%) as chronic disease, table (1).

Table (1): demographic and social characteristics of patients

Characteristics		Non-recurrent	Recurrent	Patient total
Age		37.17±15.14	32.00±13.3	200
Gender	Male	142 (93.4%)	10 (6.6%)	152
	Female	45 (93.75%)	3 (6.25%)	48
Education Level	Read & write	16 (94.1%)	1 (5.9%)	17
	Primary	26(96.3%)	1 (3.7%)	27
	Intermediate	31 (91.2%)	3 (8.8%)	34
	Secondary	54 (93.1%)	4 (6.9%)	58
	Institute and college graduate	60 (93.75%)	4 (6.25%)	64
Marital status	Single	69 (94.5%)	4 (5.5%)	73
	Married	118 (92.9%)	9 (7.1%)	127
Chronicity	Acute	74 (93.7%)	5 (6.3%)	79
	Chronic	113 (93.4%)	8 (6.6%)	121
Residential Area	Urban	106 (92.2%)	9 (7.8%)	115
	Rural	81 (97.6%)	2 (2.4%)	83

79 patients who suffering from acute disease were lay open and collection drainage. On the other hand, 121 patients who suffering from chronic disease were treated with sinus excision and primary midline closure, table (2).

Table (2): Management of acute and chronic patients

Characteristics		Acute Patient n=79	Chronic Patient n=121	Total	P-value
Anesthesia	General	52 (41.3%)	74 (58.7%)	126 (63%)	<0.05
	Spinal	27 (36.5%)	47 (63.5%)	74 (37%)	
Surgery	Lay open	76 (66.7%)	38 (33.3%)	114 (57%)	<0.05
	Primary midline closure	3 (3.5%)	83 (96.5%)	86 (43%)	

Discussion

Patients with pilonidal sinus are suffering from pain and various complications like formation of abscess or sinus related drainage that lead to low quality of life for patients [13-14]. Recurrence condition is usually a result of the deletion of any aria during the first operation or wound infection, abscess formation leads to forming new sinus tract within cicatrizing wound. Cumulating of dead tissues, poor hygiene of wound, polluted the wound with sweating, the friction are factors that causes recurrence [15-16]. Also, Family medical history is considering a risk of the non-modifiable factors of the formation of pilonidal sinus recurrence [17-18]. Various points must be noted when choosing between the two techniques primary closure and Lay-open after sinus excision [19]. The infected or injured tissue excision may be its incomplete process and the site of operation is kept open with draining for a couple of weeks and the recurrence rate is about 20%. For that, open technique that needed more and prolonged care with regular curettage and remove of the granulating tissue in order to avoid premature closure or skin edges binding before incomplete healing process of cavity [20-22]. Otherwise, Meta-analytic works and studies demonstrates rate of recurrence was lower for wide excision which leaving the site of operation open than primary closure technique but they referred that primary closure technique lead to heals faster [23-24-26]. Different factors showed relationship with Pilonidal sinus. Family history, prolong sitting with less baths number weekly considered to be a risk for Pilonidal sinus and overweight of patient has relationship with Pilonidal sinus [17-18].

Conclusion

The recurrence rate of Pilonidal sinus in current study is higher in the closed methods than in the opened methods, also, the same result appears in the other study, so, the open methods is regarded as the best methods in the treatment of pilonidal sinus diseases.

Ethical Considerations: All Research participants haven't been subjected to any kind of harm in any way.

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Conflict of Interest: The author declare no conflict of interest regarding this research.

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