

## Original Article

## Clinical and dermoscopic evaluation of seborrheic keratosis treated by diclofenac sodium gel

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### ABSTRACT

**Background:** Seborrheic keratosis (SK) is one of the most common dermatologic lesions. Although SKs are benign, patients with SKs frequently desire treatment for symptoms of itching and irritation or for cosmetic purposes.

**Objective:** to evaluate the treatment of SK using diclofenac sodium gel 3% confirmed dermoscopically before and after treatment.

**Methodology:** This study was interventional randomized controlled single blinded clinical trial carried out on 60 SK patients; their ages ranged from 41-70 years old. Cases were selected from the outpatient dermatology clinic at Al-Zahra University Hospital at the period from January 2018 to May 2019. Patients were divided into 2 groups: group A (study group) included 30 patients who were submitted to diclofenac sodium gel 3% twice per day for 2 months and group B (control group) included 30 patients who were taking placebo in the form of Petroleum Jelly originally (Vaseline). Dermoscopic examination was done before and after treatment to confirm the diagnosis and evaluate the response.

**Results:** in study group, complete clearance was detected in 13.3%, nearly clear in 53.4%, ≤ 1 mm thick in 23.3% and > 1 mm thick in 10.0%. As regard color, 43.3% showed no change in color (dark brown) and 56.7% cases changed to light brown, while in control group none of our patients showed complete clearance, 13.3% showed nearly clearance, ≤ 1 mm thick in 30.0% and > 1 mm thick in 56.7%. Regarding color all cases were still dark brown.

**Conclusion:** Diclofenac sodium gel 3% is an effective, non-invasive method of treating SK.

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**Keywords:** Dermoscopy; diclofenac sodium; seborrheic keratosis

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### INTRODUCTION

Seborrheic keratosis (SK) is one of the most common dermatologic lesions and considered the most common skin tumours seen by dermatologists in everyday practice. Patients desire to remove these lesions to maintain a more youthful appearance and improve their quality of life [1]. It presents as sharply demarcated, slightly raised brownish patches or plaques, usually on sun-exposed surfaces of the skin. The clinical presentation can be quite variable. It includes clinical variants, such as stucco keratosis and dermatosis papulosa nigra (DPN). Despite the diverse clinical presentation of SK, diagnosis is most often clinically straight forward [2]. Although SKs are benign, patients with SKs frequently desire treatment for symptoms of itching and irritation or for cosmetic

purposes. SK has been treated with varying efficacy by many techniques [3].

The diagnosis is readily made by clinical and dermoscopic examination in most cases. Dermoscopically, classic SKs usually show multiple milium-like cysts, comedo-like openings, fissures/ridges, brain-like appearance, light brown fingerprint-like structures, and sharply demarcated borders [4].

The treatment for SK covers a range of operative procedures such as curettage, shave excision, electrodesiccation, cryotherapy and ablative laser. Unfortunately, recurrence, scarring and pigmentary changes are common problems with these techniques.

The use of topical drug therapies in the treatment of SK has been proposed. These previously proposed therapies have shown some efficacy against SK, though none is universally effective and SK lesions tend to recur. Little progress has been made in developing new medical therapies for SK in recent years. The molecular mechanisms underlying the initiation and progress of SK are not yet clear [5]. The non-steroidal anti-inflammatory drug (diclofenac gel 3%) showed promise in a case study of a 73-year-old man with a SK lesion on his nose in which the gel applied twice daily, the lesion was dissolved within 30 days. Though diclofenac gel is FDA-approved for clearing actinic keratosis (AK), it may provide another treatment option for those whose SK lesions are in cosmetically sensitive areas [6].

In dermatology 3% diclofenac gel is used for the topical treatment of AK. Diclofenac gel is also used in treatment of genital porokeratosis, rosacea and alopecia areata [7]. Topical 3% Diclofenac gel is a non-steroidal anti-inflammatory agent that has anti-proliferative and anti-neoplastic effects [8]. It inhibits the cyclooxygenase pathway and decrease prostaglandin E2 (PGE2) synthesis [6]. The aim of this study was to evaluate the treatment of SK using diclofenac sodium gel 3% confirmed dermoscopically before and after treatment.

## PATIENTS AND METHODS

This study was interventional randomized controlled single blinded clinical trial carried out on 60 SK patients; their ages ranged from 41-70 years old. Cases were selected from the outpatient dermatology clinic at Al-Zahra University Hospital, Cairo, Egypt at the period from January 2018 to May 2019. Informed written consent was obtained from all patients. Additionally, the study protocol was approved by institutional review board of faculty of medicine for girls, Al-Azhar University Cairo, Egypt, (IRB 202007306). Patients were divided into 2 groups: group A (study group) included 30 SK patients who were submitted to diclofenac sodium gel 3% twice per day for 2 months according to guidelines of previous researches and case report by Aktas et al., [6]. Group B (control group) included 30 SK patients who were treated by placebo in the form of Petroleum Jelly originally (Vaseline) twice per day for 2 months.

### Inclusion Criteria

- Male and female patients with seborrheic keratosis.
- Age ranged from 40 -70 years old, as SK is more common in this age.
- Not receiving any topical treatment 6 months before enrollment into the study.

### Exclusion criteria:

- Patients who will be exposed to sun during treatment were excluded.

- SKs located in intertriginous sites and near eyelids.

### ➤ Methods

All patients filled a pre-designed data sheet with emphasis on the following:

- **Personal history:** This included age, residence and occupation. Special attention was paid to specific habits (e.g. sun exposure) with emphasis on the onset, course, and duration of lesions. Moreover, systemic review of all patients for any internal systemic disease or chronic debilitating condition was carried out.
- **General examination** was carried out for any systemic disease or chronic debilitating condition.
- **Detailed dermatological examination** was carried out for each patient with special emphasis on other skin lesions and skin tumors. Additionally, evaluation of the SK lesion was done regarding site, color, size and thickness.
- **Dermoscopic examination** of the lesion was done using the DermLite HÜD (AC-0492-U.S.A, polarized USB rechargeable dermoscope, manufactured in the USA), optimized for iPhone and other Smartphone and tablets endowed with high-powered LED lighting, a high-performance rechargeable battery, smaller than the ring finger, positioned over the Smartphone's camera and placed on the skin of patients. It captures high-resolution images of excellent clarity.

### ➤ Treatment application

- Group A (study group): were submitted to diclofenac sodium gel 3% was given to the patients in an opaque jar and instructed to apply it twice daily for 2 months.
- Group B (control group): were treated by Petroleum Jelly (Vaseline) twice daily for 2 months as placebo. It was also given to the patients in opaque jar and instructed to apply it twice daily for 2 months.

- **Assessment:** Clinical and dermoscopic images were taken from the SK at the baseline visit and after 2 months.

#### I. Clinical assessment:

- 1) SKs were graded using the Physician's Lesion Assessment (PLA) scale before and after treatment according to Baumann et al. [9] scaling system as following:
  - 0 Clear (no visible SKs)
  - 1 Nearly clear
  - 2 A thin SK 1mm or less in depth
  - 3 A thick SK more than 1mm in depth
- 1) Thickness was measured by ruler with millimeter and centimeter marks.
- 2) Patients were evaluated for their degree of clinical improvement by clinical and dermoscopic changes of the lesions with good

cosmetic results at the end of treatment period (2 months) by 2 blinded dermatologists. The treatment response was categorized into 4 grades:

1. Excellent improvement (75-100% clearing)
2. Moderate improvement (50-75% clearing)
3. Mild improvement (25-50% clearing)
4. Minimal improvement (< 25% clearing)

**II. Dermoscopic assessment:** Patients were evaluated for their degree of improvement by gradual disappearance of dermoscopic criteria:

- Sharp demarcated borders
- Cerebriform pattern
- Fat fingers
- Milia-like cyst
- Moth-eaten border
- Fissures and ridges
- Crypts
- Comedo-like opening
- Network-like structures

**III. Patients satisfaction:** Patients were evaluated using the following grading system:

- Highly satisfied
- Moderate satisfied
- Mild satisfied
- Not satisfied

### Statistical analysis

The collected data was revised, coded, tabulated and introduced to a personal computer using Microsoft Excel. Data was presented and suitable analysis was done according to the type of data obtained for each parameter. Descriptive statistics include Mean  $\pm$  Standard deviation ( $\pm$  SD), range for parametric numerical data, frequency and percentage of categorical data. The p-value < 0.05 was considered significant. Student's T test was used to compare between quantitative data. Chi square-test was used for comparison of categorical data.

## RESULTS

The present study included 60 patients, with clinically and dermoscopically diagnosed SK. Group A (study group): included 30 patients, 17 patients were males (56.7%) and 13 patients were females (43.3%), their ages ranged from 41 to 70 years old with a Mean  $\pm$  SD (53.8 $\pm$ 8) while Group B (Control group) included 30 patients, 19 patients were males (63.3%) and 11 patients were females (36.7%), their ages ranged from 41 to 70 years with a Mean  $\pm$ SD (57.2 $\pm$ 8.2). The duration of lesions ranged from 6-84 months (37.7 $\pm$ 18.3). Age, sex, and duration showed no statistically significant difference between patient and control groups (Table 1).

In patient group, the cases with number of more than or equal to 5 lesions were 8 cases (26.7%) while cases with number of less than 5 lesions were 22 cases

(73.3%). relating to site of lesions, in patient group, the lesions were located on the scalp in 11 cases (36.7%), forehead in 3 cases (10.0%), face in 4 cases (13.3%), cheek in 3 cases (10.0%), upper chest in 1 case (3.3%), shoulders in 3 cases (10.0%), upper back in 2 cases (6.7%), dorsum of hand in 3 cases (10.0%). about clinical types, in patient group, Stucco keratosis were in 8 case (26.7%), dermatosis papulosa nigra in 3 cases (10.0%), melanoacanthoma in 8 cases (26.7%) and flat seborrheic keratosis in 11 cases (36.7%). Number, site, and clinical types showed no statistically significant difference between patient and control groups (Table 2).

In patient group; PLA Before treatment, nearly clear in 6 cases (20.0%),  $\leq$  1 mm thick in 15 cases (50.0%) and > 1 mm thick in 9 cases (30.0%), while after treatment: 4 cases showed complete clearance (13.3%), nearly clear in 16 cases (53.4%),  $\leq$  1 mm thick in 7 cases (23.3%) and > 1 mm thick in 3 cases (10.0%) (Figure 1).

In control group; PLA was the same before and after treatment (showed no change), none of our patients showed complete clearance, nearly clear in 4 cases (13.3%),  $\leq$  1 mm thick in 9 cases (30.0%) and > 1 mm thick in 17 cases (56.7%).

The patient group showed better improvement. There was highly statistically significant difference ( $p = 0.000$ ) between patients and control group as regard PLA after treatment (Figure 2) (Table 3).

Before treatment there was no statistically significant difference ( $p > 0.05$ ) between patients and control group as regard PLA. After treatment there was highly statistically significant difference ( $p=0.000$ ) between both groups.

In patient and control groups all lesions were dark brown before treatment. As regards after treatment, 13 cases were still dark brown (43.3%) and 17 cases became light brown (56.7) in patient group while in control group all cases were still dark brown (100.0%) so, the relation between them is highly statistically significant as ( $p$ -value < 0.001) (Table 4).

As regard dermoscopic evaluation before treatment, we observed 9 dermoscopic criteria for SK: sharp demarcated borders in 20 cases (66.7%), comedo-like opening in 17 cases (56.7%), cerebriform pattern in 7 cases (23.3%), moth-eaten border in 11 cases (36.7%), crypts in 6 cases (20%), milia-like cyst in 12 cases (40%), fissures and ridges in 7 cases (23.3%), fat fingers in 8 cases (26.7%) and network-like structures in 13 cases (43.3%).

In patient group: There was statistically significant decrease after treatment in some dermoscopic criteria of SK ( $p$ -value < 0.05) as; sharp demarcated border and comedo-like opening, moth-eaten border, crypts, milia-like cyst, fat fingers and network-like structures,

while other criteria like; cerebriform pattern and fissures or ridges showed non-significant decrease (p-value > 0.05) (Table 5).

In Control group: there was no change in the dermoscopic criteria after placebo (p-value > 0.05) (table 6). There was no statistically significant correlation between degrees of improvement in the treated group as regard their age, duration, and clinical types of SK.

There were highly statistical significant relation (p-value < 0.001) between improvement and satisfaction in patients group where 5 patients with excellent improvement were highly satisfied, 4 patients with moderate improvement were moderate satisfied, 3 patients with moderate improvement, 3 patients with mild improvement and 2 patients with minimal improvement were mild satisfied, while 2 patients with mild improvement and 11 patient with minimal improvement were not satisfied.

**Table (1): Comparison between patients and control as regard age, sex, and duration**

Variables		Group	Patients (No.= 30)	Controls (No.= 30)	Test of significance	P value
Age (years)	Range		41-70	40-70	+t. =1.6	0.1
	Mean ±SD		53.8±8	57.2±8.2		
Sex (%)	Male		17 (56.7%)	19 63.3%)	++χ <sup>2</sup> =0.3	0.6
	Female		13 (43.3%)	11 36.7%)		
Duration (month)	Range		6-84	6-120	+t. =0.7	0.5
	Mean ±SD		37.7± 18.3	43.1± 21.7		

+t. = t- test, ++χ<sup>2</sup>= chi-square, \*p<0.05

**Table (2): Comparison between patients and control as regard lesion (number, site, clinical types)**

Group Variables		Patients (No. = 30) No. (%)	Controls (No.= 30) No. (%)	Test of significance	P value
Number of lesions	≥ 5	8 (26.7)	13 (43.3)	++χ <sup>2</sup> =1.8	0.2
	≤ 5	22 (73.3)	17 (56.7)		
Site	Scalp	11 (36.7)	11 (36.7)	++χ <sup>2</sup> =2.5	0.9
	Forehead	3 (10.0)	2 (6.7)		
	Face	4 (13.3)	7 (23.4)		
	Cheek	3 (10.0)	4 (13.3)		
	Upper chest	1 (3.3)	1 (3.3)		
	Shoulders	3 (10.0)	3 (10.0)		
	Upper back	2 (6.7)	1 (3.3)		
Clinical type	Dorsum of hand	3 (10.0)	1 (3.3)	++χ <sup>2</sup> =1	0.8
	Stucco keratosis	8 (26.7)	5 (16.0)		
	Dermatosis papulosa nigra	3 (10.0)	4 (13.3)		
	Melanoacanthoma	8 (26.7)	10 (33.3)		
	Flat seborrheic keratosis	11(36.7)	11(.7)		

++χ<sup>2</sup>= chi-square, \*p<0.05

**Table (3): Comparison between patients and control as regard PLA scale (before and after treatment with diclofenac sodium gel)**

Variables		Patients (No.= 30) No. (%)	Controls (No.= 30) No. (%)	Test of significance	P-value
PLA (Before)	Nearly clear	6 (20.0)	4 (13.3)	χ <sup>2</sup> =4.4	0.1
	≤ 1 mm thick	15 (50.0)	9 (30.0)		
	> 1 mm thick	9 (30.0)	17 (56.7)		
PLA (After)	Clear	4 (13.3)	0 (0.0)	χ <sup>2</sup> =21	<0.001*
	Nearly clear	16 (53.4)	4 (13.3)		
	< 1 mm thick	7 (23.3)	9 (30.0)		
	> 1 mm thick	3 (10.0)	17 (56.7)		

χ<sup>2</sup>= chi-square, \*p<0.05. PLA =physician lesion assessment

Table (4): Comparison between patients and control as regard color (before and after treatment with diclofenac sodium gel)

Variables		Patients (No.= 30) No. (%)	Controls (No.= 30) No. (%)	Test of significance	P-value
Color (Before)	Dark brown	30 (100)	30 (100)	-----	-----
	Light brown	0 (0.0)	0 (0.0)		
Color (After)	Dark brown	13 (43.3)	30 (100)	$\chi^2 = 23.7$	<0.001*
	Light brown	17 (56.7)	0 (0.0)		

$\chi^2$ = chi-square, \*p<0.05.

Table (5): Comparison between dermoscopic data in patients' group (before and after treatment with diclofenac sodium gel)

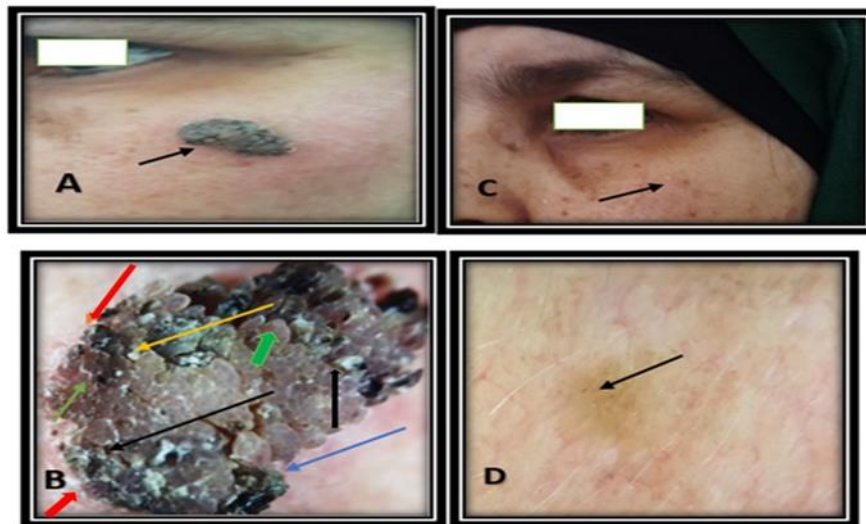
Patients group Variables	Before (No.= 30) No. (%)	After (No.= 30) No. (%)	P value
Sharp demarcated borders	20 (66.7)	9 (30)	0.004*
Comedo-like opening	17 (56.7)	7 (23.3)	0.008*
Cerebriform pattern	7 (23.3)	5 (16.7)	0.51
Moth-eaten border	11 (36.7)	6 (20)	0.001*
Crypts	6 (20)	4 (13.3)	0.015*
Milia-like cyst	12 (40)	8 (26.7)	0.001*
Fissures and ridges	7 (23.3)	4 (13.3)	0.1
Fat fingers	8 (26.7)	5 (16.7)	0.002*
Network-like structures	13 (43.3)	6 (20)	0.035*

\*p <0.05

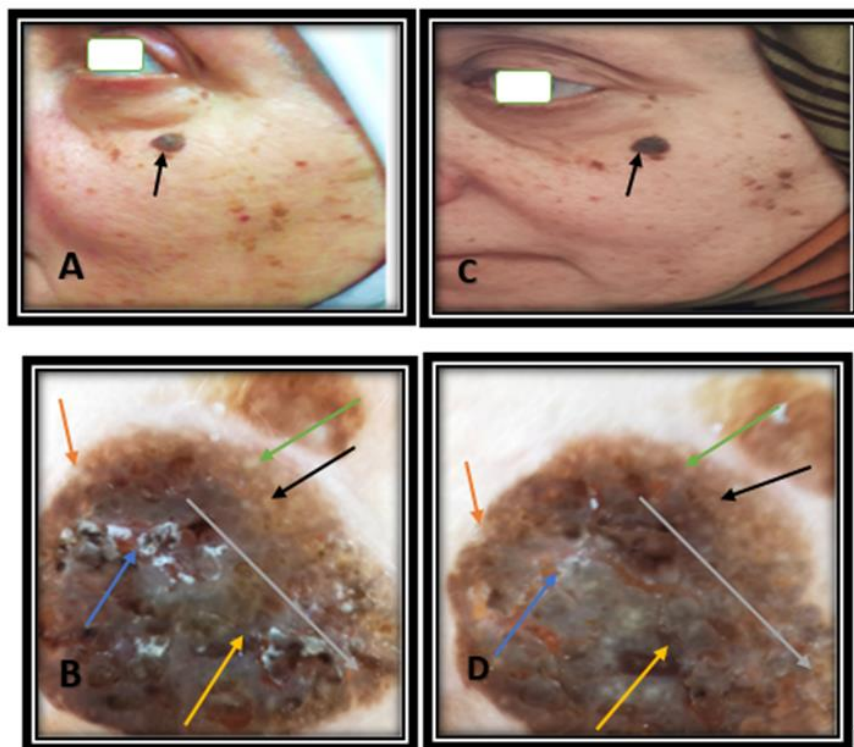
Table (6): Comparison between patients and control as regard dermoscopic data (after treatment)

Variables	After treatment	Patients (No.= 30) No. (%)	Controls (No.= 30) No. (%)	P value
Sharp demarcated borders	No	21 (70.0)	19 (63.3)	0.6
	Yes	9 (30.0)	11 (36.7)	
Comedo-like opening	No	23 (76.7)	17 (56.7)	0.1
	Yes	7 (23.3)	13 (43.3)	
Cerebriform pattern	No	25 (83.3)	24 (80)	0.7
	Yes	5 (16.7)	6 (20)	
Moth-eaten border	No	24 (80.0)	23 (76.7)	0.8
	Yes	6 (20.0)	7 (23.3)	
Crypts	No	26 (86.7)	25 (83.3)	0.7
	Yes	4 (13.3)	5 (16.7)	
Milia-like cyst	No	22 (73.3)	20 (66.7)	0.6
	Yes	8 (26.7)	10 (33.3)	
Fissures and ridges	No	26 (86.7)	24 (80)	0.5
	Yes	4 (13.3)	6 (20)	
Fat fingers	No	25 (83.3)	26 (86.7)	0.7
	Yes	5 (16.7)	4 (13.3)	
Network-like structures	No	24 (80.0)	17 (56.7)	0.05
	Yes	6 (20.0)	13 (43.3)	

\*p <0.05



**Figure (1): female patient aged 53yrs. with Single hyperpigmented, hyperkeratotic SK in her left cheek. Before treatment;** A) seborrheic keratosis clinically measured 1x2cm, Thickness >1mm, PLA=3. B) Dermoscopically it shows; Moth-eaten border (blue arrow), Crypts (yellow arrow), Fissures and ridges (black arrow), cribriform pattern (green arrow), sharp demarcated border (red arrow). **After treatment with diclofenac Sodium Gel;** C) Complete resolution and clearance of the lesion after treatment, PLA=0. D) Disappearance of most dermoscopic criteria only network-like structures.



**Figure (2): Female patient aged 50 yrs. with multiple flat pigmented SK in her face of variable sizes, Showing no clinical or dermoscopic improvement after Vaseline application as placebo.** Before treatment, A) seborrheic keratosis the diameter of largest one was 0.5 x0.5 cm and its thickness is >1mm, PLA=3 before treatment. B) Dermoscopically, Cerebriiform pattern (black arrow), Crypts (blue arrow), Milium-like cyst (green arrow), Fissures and ridges (yellow arrow), moth-eaten border (red arrow), network like structure (grey arrow). After Vaseline application as placebo; C) no clinical changes color, size, and thickness and PLA =3. D) Dermoscopically, the same dermoscopic criteria after treatment.

**DISCUSSION**

Seborrheic Keratosis is one of the most common dermatologic lesions. In this study we tried to put a light spot on the role of diclofenac sodium gel 3% in treatment of SK and evaluation of the improvement

both clinically and dermoscopically. In our study, about the age in patient group it ranged between 41-70 years with a mean of  $53.8 \pm 8$  which was in close agreement with other study by Fawzy et al, [10]. In

his study, the age ranged from 18 - 88 years with a mean of  $54.62 \pm 13.64$  and was in agreement with Lin et al. [4] where the age ranged from 19 - 90 years with a mean of  $54.5 \pm 35.5$  but was in disagreement with Roh et al. [2] where the age ranged from 19 - 98 years with a mean of  $60.8 \pm 14.6$ . In this study, The males in patient group were 17 patients (56.7%) and females were 13 patients (43.3%) with slight male predominance that was in agreement with a study by Fawzy et al. [10] where the male patients were (63%) and the female patients were (37%) with male predominance, but was in disagreement with another study by Gill et al. [11] where the male patients were (48.2%) and the female Patients were (51.8%) with slight female predominance and was in disagreement with study by Alapatt et al. [12] where females (76%) and males (24%) with high female predominance.

In the present study SK in patient group were located on the scalp in 36.7% of the cases, forehead in 10%, face in 13.3% ,cheek in 10.0%, upper chest in 3.3% of the case, shoulders in 10.0%, upper back in 6.7% cases, dorsum of hand in 10% cases where the most common site is the scalp that was in close agreement with Fawzy et al. [10] where the most common site affected was face (77.4%), followed by back (32.3%) and abdomen (25.8%). The results were also in close agreement with Lin et al. [4] where the most frequent sites of the lesions were the face (40.0%) and the trunk (38.5%), followed by the extremities (14.2%), the neck (4.1%) and the scalp (3.4%). but was in disagreement with Squillace et al. [13] where most of the excised SKs (50.3%) were located on the trunk, while (29.8%) and (19.9%) SKs were located on the head/neck and limbs, respectively also in disagreement with a study by Gill et al., [11] where most SK were found in trunk (77.5%) compared with limbs and head (22.5%).

In our study, clinical types in patient group was stucco keratosis in (26.7%), dermatosis papulosa nigra in (10.0%), melanoacanthoma in (26.7%) and flat seborrheic keratosis in (36.7%) of the cases while in control group, stucco keratosis was in (16.0%), dermatosis papulosa nigra in (13.3%), melanoacanthoma in (33.3%) and flat seborrheic keratosis in (33.7%) of the cases which was in agreement with Fawzy et al. [10] where the most common clinical variant was flat seborrheic keratosis (49%) followed by dermatosis papulosa nigra (42%). Our study was in disagreement with Abdel-Azim et al. [14] which concluded that the most common clinical type was stucco keratosis (n = 35) followed by dermatosis papulosa nigra (DPN) (n = 8), flat SK (n = 5) and melanoacanthoma (n = 2).

About the dermoscopic criteria observed in our study , we observed 9 dermoscopic criteria in contrary to research by Abdel-Azim et al. [13] that

found 10 dermoscopic criteria including our mentioned criteria plus hairpin blood vessels as follow: sharp demarcated borders (82%), comedo-like openings (50.0%), cerebriform pattern (38.0%), moth-eaten borders (34.0%), crypts (30.0%), milia-like cysts (26%), fissure and ridges (16.0%), fat fingers (4.0%), network-like structures (2.0%) and typical hairpin blood vessels (2%).

In our study, the most common finding on dermoscopy before treatment were sharp demarcated borders (66.7%), followed by comedo-like opening (56.7%) that was in agreement with Braun et al. [15] who found that the most common dermoscopic finding were sharp demarcated border in 90%, comedo-like openings were found in 71%, milia-like cyst in 66%, moth-eaten border in 46%. In the opposite way our finding was in disagreement with the study of Alapatt et al. [12] who showed that the presence of comedo-like (CL) openings (68%) was the most common finding on dermoscopy followed by fissures and ridges (FR) (62%) and sharp demarcation (SD) (62%).

In patient group there were 13.3% of the patients showed complete clearance (PLA score of 0) and nearly clearance in 53.4% of cases while in control group none of our patient showed complete clearance or report any change in PLA score. After treatment there was highly statistically significant difference (p-value=0.000) between both groups as regard PLA and color change. This indicate the effectiveness of diclofenac sodium jel in SK.

Our result in agreement with only study to date by Aktas et al., [6] on one patient aged 73-yrs old in which diclofenac sodium gel was applied topically twice a day for one month with complete clearance of his lesion.

Our results were confirmed by dermoscopic assessment. In patient group there was statistically significant decrease after treatment in most of dermoscopic criteria of SK, while in control group: there was no any change in the dermoscopic criteria. As regard side effects, we did not have any recognized local skin reaction after application like erythema, burning sensation, scarring or hyperpigmentation.

The current study has some limitation. First, the duration of the treatment was just limited to 2 months. We suggest future researchers to consider longer period of treatment. Second, the concentration of diclofenac sodium gel was 3%. We propose considering more concentrations of treatment.

## CONCLUSION

Topical 3% diclofenac sodium gel is a new treatment modality of SK. It is a simple office-based procedure, safe, cost-effective, and can be done on all skin types. Scalp is most common site of SK followed by trunk. In the future, some considerations may help in more hopeful results as:

Application of concentrations more than 3% to achieve rapid results. Combination of different lines of treatment to lessen the duration of treatment. More number of sessions may be more effective. Longer period of follow up must applied to show better results.

#### Future direction

More comparative studies between diclofenac sodium gel and other modalities such as laser to confirm effective combination tools.

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## الملخص العربي

### التقييم الاكلينيكي والديرموسكوبي للقرت الدهني المعالج بجل الديكلوفيناك صوديوم

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#### ملخص البحث

**الخلفية:** القرت الدهني هو أحد أكثر الأمراض الجلدية شيوعًا. على الرغم من أنه يصنف من الأمراض الحميدة ، الا ان المرضى الذين يعانون منه كثيرًا ما يرغبون في العلاج من أعراض الحكّة والتهيج أو لأغراض التجميل.

**الهدف:** تقييم علاج القرت الدهني باستخدام جل ديكلوفيناك الصوديوم بنسبة 3% المشخص عن طريق المنظار الجلدي قبل وبعد العلاج.

**الطرق:** هذه الدراسة عبارة عن تجربة متداخلة عشوائية 0 أجريت هذه الدراسة على 60 مريضاً تراوحت اعمارهم بين 41-70 سنة. تم اختيار الحالات من العيادة الخارجية للأمراض الجلدية بمستشفى الزهراء الجامعي في الفترة من يناير 2018 إلى مايو 2019. تم تقسيم المرضى إلى مجموعتين: المجموعة أ (مجموعة الدراسة) تضمنت 30 مريضاً تم إخضاعهم للديكلوفيناك الصوديوم جل بنسبة 3% مرتين يوميا لمدة شهرين ، وشملت المجموعة ب (مجموعة التحكم) 30 مريضاً كانوا يستخدمون الدواء الوهمي (الفالين). حيث تم إجراء الفحص بالمنظار قبل وبعد العلاج لتأكيد التشخيص وتقييم الاستجابة.

**النتائج:** في مجموعة الدراسة، تم الكشف عن إزالة كاملة في 13.3%، وإزالة شبه كاملة في 53.4% ، وسمك  $\geq 1$  مم في 23.3%، وسمك أكبر من 1 مم في 10.0%. فيما يتعلق باللون، لم تظهر أي تغيير في اللون (بني غامق) في 43.3% وتغيرت 56.7% من الحالات إلى البني الفاتح ، بينما في مجموعة التحكم لم يحدث إزالة كاملة في اي من الحالات ، وإزالة شبه كاملة 13.3% ، وسمك  $\geq 1$  ملم في 30.0%،  $< 1$  مم في 56.7%. من حيث اللون، جميع الحالات لا تزال بنية داكنة.

**الاستنتاجات:** ديكلوفيناك صوديوم جل 3% طريقة فعالة وغير جراحية لعلاج القرتن الدهني.

**الكلمات المفتاحية:** الديرموسكوب، ديكلوفيناك الصوديوم، القرتن الدهني.

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