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**Correlation Between Clinical and Dermoscopic Feature
of Seborrheic Keratosis in Dermatology Department in
Port Sudan Teaching Hospital
(October 2023 Up to March 2024)**

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2026

ABSTRACT

Background: Seborrheic keratosis (SK) is a common benign skin lesion often encountered in dermatological practice. Dermoscopic examination has emerged as a valuable tool for diagnosing SK, aiding in distinguishing it from other skin lesions. Understanding the correlation between clinical morphology and dermoscopic features of SK can enhance diagnostic accuracy and guide appropriate management strategies. Investigating this correlation can provide insights into the characteristic dermoscopic patterns associated with different clinical presentations of SK, facilitating more precise clinical assessments and treatment decisions.

Objectives: To find out the correlation between clinical and dermoscopic feature of seborrheic keratosis in Dermatology Department in Port Sudan teaching hospital – (October 2023 up to March 2024)

Methods: This cross-sectional study was conducted at Port Sudan Teaching Hospital in Sudan from October 2023 to March 2024 and examined the correlation between clinical and dermoscopic features in seborrheic keratosis. All adult patients diagnosed with seborrheic keratosis were included Forty patients (40). Data on demographics, medical history, lesion characteristics, and dermoscopic features were collected using a researcher-administered questionnaire and patient files. Descriptive statistics and chi-square tests were used to analyze the data using SPSS 28.0. Ethical approval was obtained from relevant authorities and informed consent was acquired from all participants.

Results: the study covered forty patients (n=40). Demographic analysis revealed a predominant age group of over 40 years, constituting twenty-three (57.5%) of the participants, with females slightly outnumbering males at twenty-one patients (52.5%). Most patients hailed from urban areas, comprising twenty-three patients (57.5%) of the total cohort. Medical history indicates onset of SK typically occurs between 30 to 40 years in twenty-one (52.5%) of cases, with a majority having the condition for less than 15 years, twenty-nine patients (72.5%). Furthermore, a significant family history of similar lesions is noted in thirty-one (77.5%) of participants. Clinical examination reveals the face and neck as the most common sites of lesions, accounting for twenty-six patients (65.0%) and twenty-one patients (52.5%), respectively, followed by the chest five patients (12.5%), back four patients (10.0%), thighs two patients (5.0%), and legs one patient (2.5%). CSK is identified as the most prevalent clinical morphology feature, representing twenty-two

patients (55.0%) of cases, followed by Dermatoses Papulosa Nigra at eighteen patients (45.0%). Pedunculated Variety lesions are observed in seven (17.5%) of cases, while Stucco Keratoses are rare, making up only one patient (2.5%) of the total. Symptoms are largely absent, with only five (12.5%) of patients reporting itching. Dermoscopic features such as fissures and ridges thirty-six patients (90.0%), moth-eaten borders, thirty-three patients (82.5%), and sharp demarcations twenty-nine patients (72.5%) are prominent, along with comedo-like openings twenty-eight patients (70.0%) and milia-like cysts twenty-two patients (55.0%). Less common features include fingerprint-like structures eleven patients (27.5%) and hairpin blood vessels eight patients (20.0%). Cross-tabulation analysis highlights significant associations between CSK and certain dermoscopic findings, notably comedo-like openings ($p = 0.0125$) and fingerprint-like structures ($p = 0.0049$), accounting for twenty-eight (70.0%) and eleven (27.5%) of cases, respectively. Similarly, Dermatoses Papulosa Nigra shows significant correlations with milia-like cysts ($p = 0.0477$) and fingerprint-like structures ($p = 0.0357$), constituting twenty-two patients (55.0%) and eleven patients (27.5%) of cases, respectively. However, no significant associations are found between Stucco Keratoses and dermoscopic findings. Trends suggesting potential associations between Pedunculated Variety and dermoscopic features are noted, emphasizing the need for larger studies to validate these trends.

Conclusion: the study concluded that demographic analysis revealed a predominant occurrence of SK among individuals over 40 years old, with a notable female predominance. The study identified Common Seborrheic Keratosis (CSK) as the most prevalent clinical morphology feature, and significant associations are observed between CSK and certain dermoscopic findings such as comedo-like openings and fingerprint-like structures. Similarly, Dermatoses Papulosa Nigra demonstrates significant correlations with milia-like cysts and fingerprint-like structures. However, no significant associations are found between Stucco Keratoses and dermoscopic findings, indicating the need for further research. Overall, these findings provide valuable insights into the characteristic dermoscopic patterns associated with different clinical presentations of SK, facilitating more precise clinical assessments and treatment decisions in dermatological practice.

0.1 INTRODUCTION

Because of its diverse appearance, seborrheic keratosis (SK), the most frequent benign epidermal tumor of the skin, frequently causes patient worry. ^[1] Elderly people and Cauca-

sians are more likely to suffer from the illness. Both men and women are equally impacted. The etiology of SK has occasionally been attributed to a wide range of different variables, although none of them is fully understood. The main causes have been identified as genetics and sun exposure.^[2]

Although SK lesions can develop everywhere on the body, they seem to manifest most frequently on the face and upper trunk. The lesions may itch, although they are typically asymptomatic.^[3] Despite the fact that there are several clinical variations of the lesions, they typically start out as well-defined, flat, dull, tan, or brown patches. As they develop, they get waxier and more papular, seeming “stuck-on” or verrucous.^[3]

The SK may progressively thicken and take on a verrucous, abrasive appearance. SKs can also exhibit blue-gray hues and uneven boundaries; in such lesions, it is challenging to rule out melanoma with only a naked-eye inspection. With an expanding SK, this gets more and more difficult. Some SKs frequently itch or become inflamed, and these lesions may resemble skin malignancies like squamous cell carcinoma (SCC).^[4] Although SK has a very high incidence and prevalence, its etiology, genetic makeup, and molecular characteristics have just recently been discovered.^[5]

Therefore, seborrheic keratosis, while predominantly benign, presents a diverse array of clinical manifestations^[6 - 11]. Dermoscopy plays a crucial role in enhancing diagnostic accuracy by unveiling characteristic dermoscopic features that aid in differentiation from other skin lesions^[12]. A comprehensive understanding of the correlation between clinical and dermoscopic features of seborrheic keratosis is pivotal for accurate diagnosis and optimal management, ultimately contributing to improved patient outcomes and the reduction of unnecessary interventions^[13]. Despite the fact that SK is currently among the most prevalent cosmetic skin problems, there is a dearth of information about its clinical, dermoscopic, and correlative characteristics. This investigation could reveal important details about SK^[14, 15].

Throughout this context, this study aimed to assess the correlation between clinical and dermoscopic feature of seborrheic keratosis in Dermatology Department in Port Sudan teaching hospital from October 2023 up to March 2024.

OBJECTIVES

General Objective

To find out the correlation between clinical and dermoscopic feature of seborrheic keratosis in

Dermatology Department in Port Sudan teaching hospital – (October 2023 up to March 2024)

Specific objectives:

1. To identify the common clinical morphology of seborrheic keratosis
 2. To determine the dermoscopic features of seborrheic keratosis.
- To correlate between dermoscopic and clinical features of seborrheic keratosis.

Methodology

Study design

A cross-sectional hospital-based study.

Study area

This study was conducted in Dermatology Department in Port Sudan teaching hospital.

Study duration

The study was conducted within the period from October 2023 up to March 2024.

Study Population

All patients evaluated for **seborrheic** keratosis who attended **study area** during study period.

Inclusion Criteria

- Patients who diagnosed as **seborrheic** keratosis patients clinically attended from October 2023 –March 2024.
- Adults.

Exclusion Criteria

- Patients who refused to participate in the study.

Sample size

Total coverage method was applied due the limitation of cases, by including all participants who fulfilled the study criteria. The total number covered was 40 participants.

Data collection tools:

Direct interviewing questionnaire was used to collect data, questionnaire consist two parts first part for patients sociodemographic characteristics (age, sex, residence), and patients medical history (age of onset, duration, family history of similar lesions) the second part for patients examination (including : site of lesions, number of lesions, clinical morphology features, symptoms associated with the lesions, dermoscopic feature), some information's was taken from patients file, Data was collected by researcher.

Study variables

Study variable classified as shown in the following table:

Main Categories	Variable
Independent	Demographical data
	Age
	Gender
	Residence
	Age of onset
	Duration
	Family history of similar lesions
	Site of lesions
Dependent	Number of lesions
	Clinical morphology features
	symptoms associated with the lesions
	Dermoscopic feature.

- Note: the detailed study variables found in **appendix B** for more detail's questionnaire

Data entry, analysis and presentation

- Data was entered, cleaned, and analyzed using Statistical Package of Social Science (SPSS) computer program. Version 28. 0
- Descriptive statistics in term of frequency tables with percentages and graphs. Means and standard deviations, presented with relevant graphical representation for quantitative data.
- Program. Chi square test was used to test the relationship between the variables, P value was considered significant if ≤ 0.05 (CI 95%).

Ethical considerations

- Written ethical clearance and approval for conducting this research was obtained from Sudan Medical Specialization Board Ethical Committee.
- Written permission was obtained from the administrative authority of Dermatology Department in Port Sudan teaching hospital.
- Written consent was obtained from all participants.
- Confidentiality was considered intentionally, data was used anonymously by using identity numbers instead of names in order to protect participants' identity and keep securely, and information was used for research purpose only.

No reference to any individual participant was made in study reports

Results the study covered forty patients ($n=40$). Demographic analysis revealed a pre-dominant age group of over 40 years, constituting twenty-three (57.5%) of the participants, with females slightly outnumbering males at twenty-one patients (52.5%). Most patients hailed from urban areas, comprising twenty-three patients (57.5%) of the total cohort. Medical history indicates onset of SK typically occurs between 30 to 40 years in twenty-one (52.5%) of cases, with a majority having the condition for less than 15 years, twenty-nine patients (72.5%). Furthermore, a significant family history of similar lesions is noted in thirty-one (77.5%) of participants. Clinical examination reveals the face and neck as the most common sites of lesions, accounting for twenty-six patients (65.0%) and twenty-one patients (52.5%), respectively, followed by the chest five patients (12.5%),

back four patients (10.0%), thighs two patients (5.0%), and legs one patient (2.5%). CSK is identified as the most prevalent clinical morphology feature, representing twenty-two patients (55.0%) of cases, followed by Dermatitis Papulosa Nigra at eighteen patients (45.0%). Pedunculated Variety lesions are observed in seven (17.5%) of cases, while Stucco Keratoses are rare, making up only one patient (2.5%) of the total. Symptoms are largely absent, with only five (12.5%) of patients reporting itching. Dermoscopic features such as fissures and ridges thirty-six patients (90.0%), moth-eaten borders, thirty-three patients (82.5%), and sharp demarcations twenty-nine patients (72.5%) are prominent, along with comedo-like openings twenty-eight patients (70.0%) and milia-like cysts twenty-two patients (55.0%). Less common features include fingerprint-like structures eleven patients (27.5%) and hairpin blood vessels eight patients (20.0%). Cross-tabulation analysis highlights significant associations between CSK and certain dermoscopic findings, notably comedo-like openings ($p = 0.0125$) and fingerprint-like structures ($p = 0.0049$), accounting for twenty-eight (70.0%) and eleven (27.5%) of cases, respectively. Similarly, Dermatitis Papulosa Nigra shows significant correlations with milia-like cysts ($p = 0.0477$) and fingerprint-like structures ($p = 0.0357$), constituting twenty-two patients (55.0%) and eleven patients (27.5%) of cases, respectively. However, no significant associations are found between Stucco Keratoses and dermoscopic findings. Trends suggesting potential associations between Pedunculated Variety and dermoscopic features are noted, emphasizing the need for larger studies to validate these trends.

Conclusion the study concluded that demographic analysis revealed a predominant occurrence of SK among individuals over 40 years old, with a notable female predominance. The study identified Common Seborrheic Keratosis (CSK) as the most prevalent clinical morphology feature, and significant associations are observed between CSK and certain dermoscopic findings such as comedo-like openings and fingerprint-like structures. Similarly, Dermatitis Papulosa Nigra demonstrates significant correlations with milia-like cysts and fingerprint-like structures. However, no significant associations are found between Stucco Keratoses and dermoscopic findings, indicating the need for further research. Overall, these findings provide valuable insights into the characteristic dermoscopic patterns associated with different clinical presentations of SK, facilitating more precise clinical assessments and treatment decisions in dermatological practice.

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