Revista Información Científica

ISSN 1028-9933
Universidad de Ciencias Médicas de Guantánamo

July 2025 Volume 104 e4905
DOI: https://doi.org/10.5281/zenodo.15389483

ORIGINAL ARTICLE

Characterization of skin lesions by dermatoscopy at the Las Tunas provincial general hospital, Cuba

Caracterización de lesiones cutáneas mediante dermatoscopia en el hospital general de provincia Las Tunas, Cuba

Caracterização de lesõescutâneas por dermatoscopia no hospital geral provincial Las Tunas, Cuba

Erlinda Ricardo Mora[I], Alibé Ortiz José[I], YordaniaVelázquezAvila[II]

[I] Hospital General Docente Dr. Ernesto Guevara de la Serna. Las Tunas, Cuba.
[II]Hospital Pediátrico Provincial Docente Mártires de Las Tunas. Las Tunas, Cuba.

***Corresponding author:** erlinda@ltu.sld.cu

Received: 15-01-2025 **Accepted:** 21-06-2025 **Published:** 01-07-2025

ABSTRACT

Introduction: dermoscopy has been widely used for the diagnosis of skin lesions at the Las Tunas Provincial General Hospital for several years, but studies are needed to demonstrate the results of its clinical application. **Objective:** to characterize skin lesions using dermoscopy in patients seen in the Dermatology Clinic of the Hospital General Docente "Dr. Ernesto Guevara de la Serna" in Las Tunas, Cuba, from 2022 to 2024. **Method:** an observational, descriptive, cross-sectional, and prospective study was conducted. The sample consisted of 367 patients who met the inclusion criteria. The study variables were malignancy, pigmentation, dermoscopic patterns, clinical and histopathological diagnosis. Percentage analysis and positivity rate were performed with respect to the dermatoscopic and histopathological diagnosis, considering PI ≥85%. Cohen's kappa index was determined to determine the degree of agreement between both techniques. **Results:** basal carcinoma was highlighted as malignant and non-pigmented (22.62%), scabies predominated among benign lesions (15.53%), and seborrheic keratosis predominated among pigmented lesions (14.44%). Shiny reddish-white areas predominated in basal carcinoma (17.71%). Moth-eaten edges were found in seborrheic keratosis (9.81 5). Histopathological examination was required in 63.49% of patients. There was agreement between dermoscopy and histopathology (IP=97.85), with good concordance between both techniques (KC=0.96). **Conclusions:** dermoscopy in patients with different dermatoses allows for a more precise diagnosis and early detection of malignant lesions, with a positive impact on their prognosis.

Keywords: dermoscopy; dermatoses; melanoma; skin cancer; skin lesions

RESUMEN

Introducción: en el hospital general de provincia Las Tunas desde hace varios años se ha extendidola aplicación de la dermatoscopia para el diagnóstico de lesiones cutáneas, pero se necesita de estudios que evidencien los resultados de su aplicación clínica. **Objetivo:** caracterizarlas lesiones cutáneas mediante dermatoscopia en pacientes atendidos en consulta de Dermatología del Hospital General Docente "Dr. Ernesto Guevara de la Serna", de Las Tunas, Cuba, del 2022al 2024.**Método:** se realizó un estudio observacional, descriptivo, transversal y prospectivo. La muestra la constituyeron 367 pacientes que cumplieron los criterios de inclusión. Las variables de estudio fueron: malignidad, pigmentación, patrones dermatoscópicos, diagnóstico clínico e histopatológico. Se realizó análisis porcentual e índice de positividad respecto al diagnóstico dermatoscópico e histopatológico, considerándose efectivos cuando IP≥85%. Para determinar el grado de acuerdo entre ambas técnicas se determinó índice kappa de Cohen. **Resultados:** se destacó el carcinoma basal como maligna y no pigmentada (22,62 %), entre las benignas predominó la escabiosis (15,53 %) y, entre las lesiones pigmentadas, las queratosis seborreicas (14,44 %). En el carcinoma basal predominaron las áreas blanco-rojizas brillantes (17,71 %). En la queratosis seborreica se encontraron bordes apolillados (9,81 5). El 63,49 % de los pacientes necesitó estudio histopatológico. Hubo coincidencia entre dermatoscopia e histopatología (IP=97,85), con buena concordancia entre ambas técnicas (KC=0,96). **Conclusiones:** la dermatoscopia en pacientes con diferentes dermatosis permite un diagnóstico más preciso y la detección temprana de lesiones malignas, con un impacto positivo en su pronóstico.

Palabras clave: dermatoscopia; dermatosis; melanoma; cáncer de piel; lesiones cutáneas

RESUMO

Introdução: a dermatoscopia tem sido amplamente utilizada para o diagnóstico de lesõescutâneas no Hospital Geral Provincial de Las Tunas hávários anos, mas sãonecessáriosestudos para demonstrar os resultados de suaaplicação clínica. **Objetivo:** caracterizar as lesõescutâneas por meio da dermatoscopia em pacientes atendidos na Clínica de Dermatologia do Hospital General Docente "Dr. Ernesto Guevara de la Serna"em Las Tunas, Cuba, de 2022 a 2024. **Método:**foi realizado umestudo observacional, descritivo, transversal e prospectivo. A amostrafoi composta por 367 pacientes que atenderamaoscritérios de inclusão. As variáveis do estudoforam: malignidade, pigmentação, padrões dermatoscópicos, diagnóstico clínico e histopatológico. A análisepercentual e a taxa de positividadeforam realizadas emrelaçãoao diagnóstico dermatoscópico e histopatológico, considerando IP ≥85%. O índice kappa de Cohen foi determinado para determinar o grau de concordância entre ambas as técnicas. **Resultados:** o carcinoma basal destacou-se como maligno e não pigmentado (22,62%), a escabiosepredominou entre as lesões benignas (15,53%) e as ceratoses seborreicas predominaram entre as pigmentadas (14,44%). Áreas branco-avermelhadasbrilhantespredominaram no carcinoma basal (17,71%). Bordas roídas por traçasforam encontradas nasceratoses seborreicas (9,81 ± 5). Exame histopatológico foinecessárioem 63,49% dos pacientes. Houveconcordância entre dermatoscopia e histopatologia (IP=97,85), com boa concordância entre ambas as técnicas (KC=0,96). **Conclusões:** a dermatoscopia em pacientes com diferentes dermatoses permite um diagnóstico mais preciso e detecçãoprecoce de lesões malignas, com impacto positivo no seuprognóstico.

Palavras-chave: dermatoscopia; dermatose; melanoma; câncer de pele; lesões de pele

How to cite this article:
Ricardo Mora E, Ortiz José A, Velázquez Avila Y. Characterization of skin lesions by dermatoscopy at the Las Tunas provincial general hospital,. Rev Inf Cient [Internet]. 2025 [cited Access date]; 104:e4905. Available at: http://www.revinfcientifica.sld.cu/index.php/ric/article/view/4905

INTRODUCTION

Dermoscopy is a noninvasive diagnostic technique used for the in vivo observation of skin lesions, enabling the recognition of structures not visible to the human eye. With its emergence, also known as epiluminescence microscopy or surface microscopy, it has become possible to visualize lesions down to the dermis, accurately identify them, and identify specific characteristics of many diseases through diagnostic patterns.[1]

Its origin as a diagnostic technique dates back to the 17th century. In 1655, Pierre Borel (1620-1671), a French physician and botanist was one of the pioneers in the use of the microscope and the first to introduce surface microscopy, using this technique to observe the capillaries of the nail bed.[1] According to the plans of another research scientist, Muller, several monocular and binocular capillary microscopes were built from 1916 to 1920. In the latter year, Saphier coined the term dermatoscopy. In 1950, Léon Goldman described its usefulness in the investigation of pigmented skin lesions, and in 1971, Rona MacKie recognized the importance of its use in differentiating between benign and malignant skin lesions.[2]

Among the optical benefits of visualizing, the skin lesions with a dermatoscope are the elimination of reflection and increased refraction. These phenomena allow the visualization of structures beneath the stratum corneum that are not visible to the naked eye, due to the use of immersion media or polarized light. In addition to the biophysical phenomena of reflection, refraction, dispersion, and absorption that interact with the skin when observing a lesion by dermoscopy, other factors such as light, vision, color perception, and skin roughness also come into play; variables that cannot be ignored when conducting clinical studies with live patients.[2]

This technique has been widely used in pigmented lesions, with a sensitivity of 92% for malignant melanoma in junctional nevus (73%–83%), pigmented Spitz nevi (53%–93%), and non-melanocytic pigmented lesions (93%).[1] Martínez-Piva et al.[3] found a significant association between some dermoscopic patterns and the Breslow stain for melanoma.

The safety of the technique has allowed its use to expand and new dermoscopic patterns have emerged that have been correlated with histopathological results in non-melanoma cancers;[4,5] tumors such as hemangiomas, pyogenic granuloma, mastocytosis, juvenile xanthogranuloma; inflammatory dermatoses such as psoriasis, lichen planus, lichen nitidus, chronic fixed discoid lupus erythematosus (CFDLE); Infectious diseases such as scabies, pediculosis, cutaneous warts, molluscum contagiosum, and leishmaniasis; even for evaluating the hair and scalp, as in alopecia areata, and the nails, as in subungual hyperkeratosis and onychomycosis.[3]

Currently, several studies describing the diagnostic efficacy of this technique consider it an intermediate step between clinical observation and the histopathological study of a lesion.[6] The importance of this topic lies in the need to improve diagnostic accuracy for dermatoses of diverse etiologies, especially those of a malignant nature. The definitive diagnosis in dermatology is generally histopathological; however, dermoscopy increases diagnostic accuracy, which favors providing timely treatment and reduces unnecessary surgical procedures.

The use of dermoscopy for the diagnosis of skin lesions has become widespread in the Dermatology Department of the Dr. Ernesto Guevara de la Serna General Teaching Hospital, with a history of studies in non-melanoma skin cancer. However, studies are needed to demonstrate the results of its clinical application in other dermatoses.

Due to its importance, this study was conducted to characterize skin lesions using dermoscopy in patients seen in the Dermatology Department of the Dr. Ernesto Guevara de la Serna General Teaching Hospital in Las Tunas, Cuba, from 2022 to 2024.

METHOD

An observational, descriptive, cross-sectional, and prospective study was conducted among patients treated in the Dermatology Department of the "Dr. Ernesto Guevara de la Serna" General Teaching Hospital in Las Tunas Province, Cuba, from 2022 to 2024. From a sample of 7,696 people treated with dermatological conditions, a random sample of 367 patients was selected, with 95% reliability and a 5% margin of error. They were selected by simple random sampling and met the inclusion and exclusion criteria.

Inclusion criteria: Patients over 18 years of age with dermatological disease, with their informed consent, who underwent dermoscopy.

Exclusion criteria: Patients who had a concomitant disease that affected communication and comprehension (mental retardation, psychosis, deafness, dumbness, blindness) and prevented them from participating in the research.

Information was obtained from primary sources through patient interviews and secondary sources through review of medical records and histopathological reports. All patients underwent a history, dermatological examination, and dermoscopy. If findings compatible with premalignant or malignant lesions or a non-infectious clinical diagnosis were present, a histopathological study was performed.

The study variables were malignancy, pigmentation, dermoscopic patterns, and clinical and histopathological diagnoses. A frequency study was performed using percentage analysis and the positivity index (PI) for the dermoscopic and histopathological diagnoses. The technique was considered effective when the PI ≥85%.

To determine the degree of agreement between both techniques, Cohen's kappa (KC) index was determined, which was interpreted as follows: Weak agreement <0.20; Fair agreement: 0.20–0.40; Moderate agreement: 0.40–0.60; Considerable agreement: 0.60–0.80; and Very good agreement: >0.80; with a significance level of P≤0.05.

RESULTS

Among the dermatoses studied according to malignancy (Chart 1), basal cell carcinoma stood out as the most common, accounting for 22.62% (malignant), and among the benign ones, scabies predominated at 15.53%. Seborrheic keratosis and actinic keratosis followed in order of frequency, with 14.71% and 14.44%, respectively. Molluscum was the least common (0.54%).

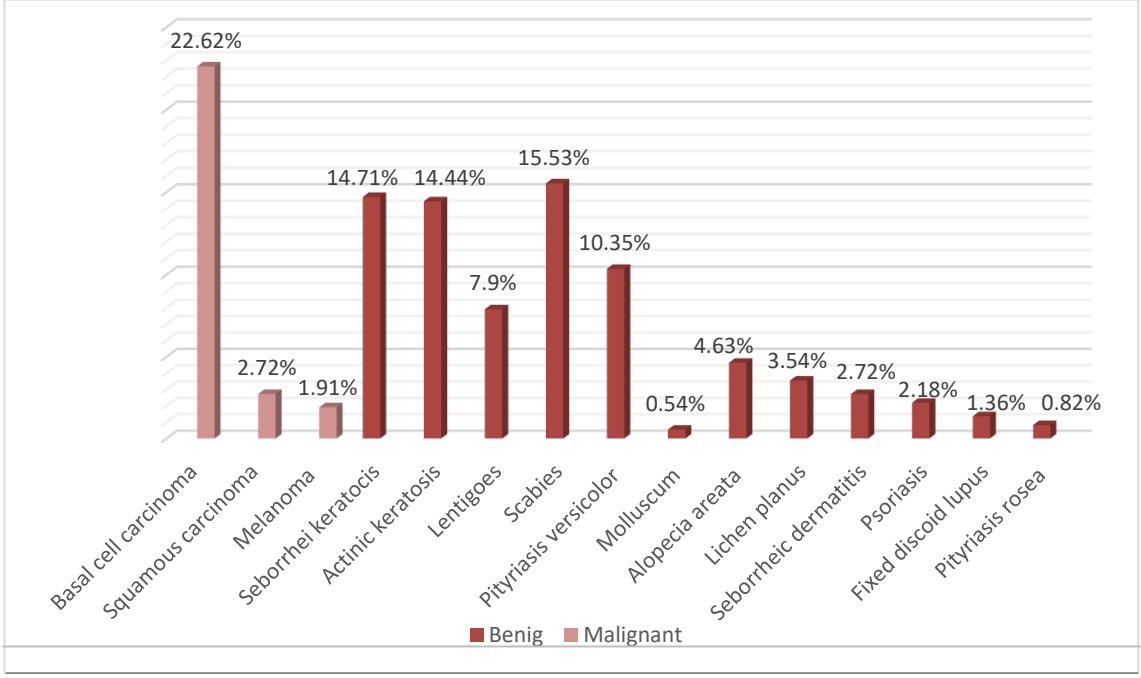

Chart 1: Dermatoses by malignancy

According to pigmentation (Chart 2), seborrheic keratosis were more common among pigmented patients, at 14.44%, and basal cell carcinoma was more common among non-pigmented patients, at 21.25%.

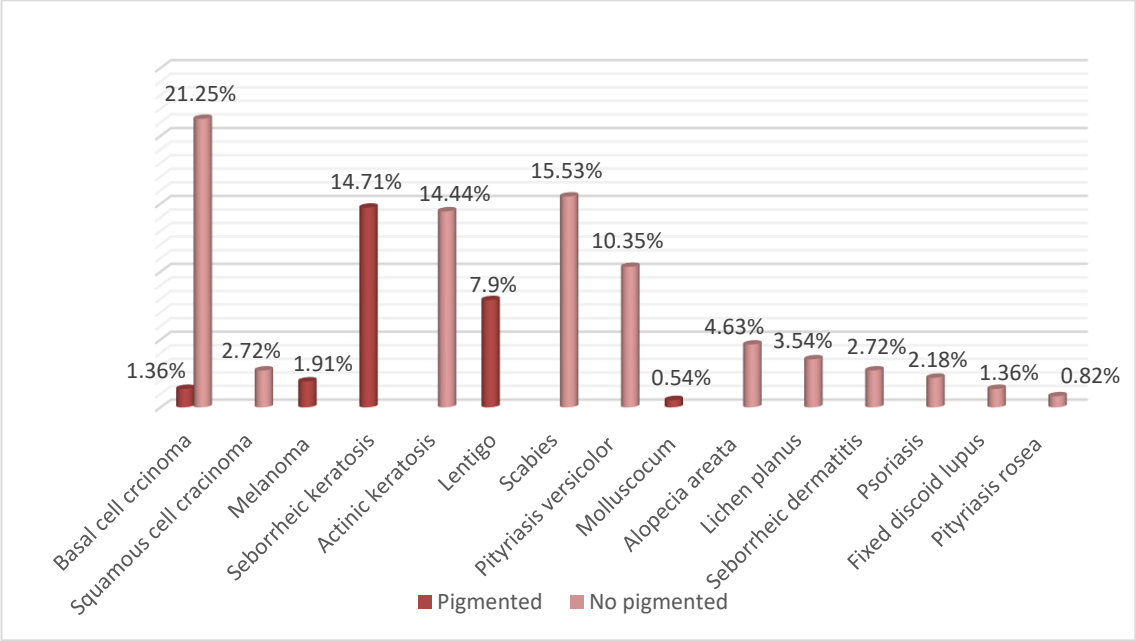

Chart 2: Dermatoses according to pigmentation.

Chart 3 illustrates the results of the dermoscopic findings in the most common non-pigmented dermatoses evaluated in the study. In basal cell carcinoma, shiny reddish-white areas (17.71%) and arborescent vessels (16.89%) predominated. In scabies, furrows and undulations (14.17%) and fine white scales (13.35%) were found. In actinic keratosis, the rosette pattern and crown vessels were more common, with 10.9% and 9.54% for each.

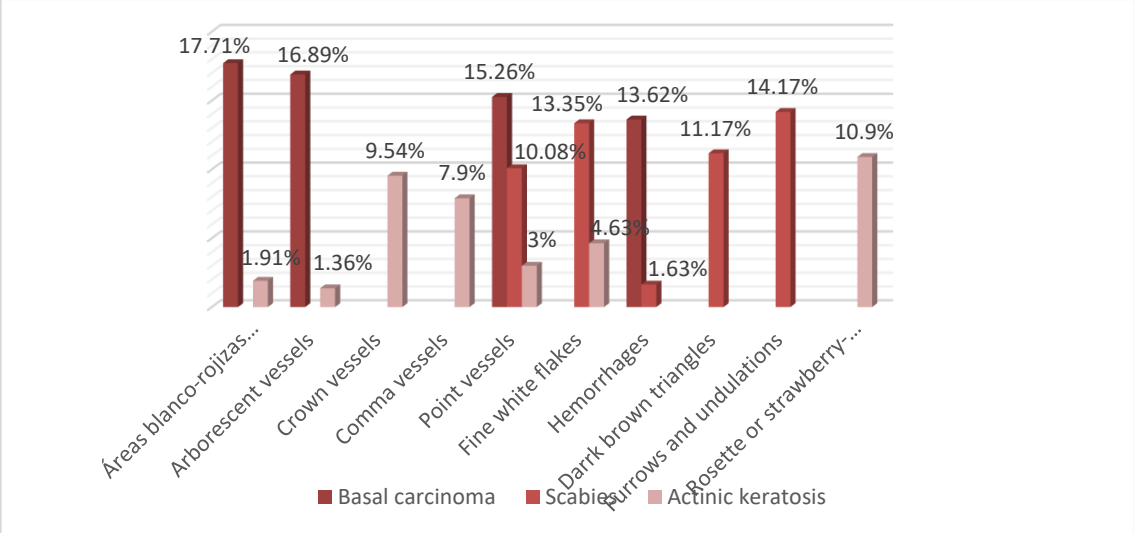

Chart 3: Dermatoscopic patterns in non-pigmented dermatoses.

When analyzing the dermoscopic findings in the most common pigmented dermatoses (Chart 4) evaluated in the study, the presence of arborescent vessels in 1.36% of cases of pigmented basal cell carcinoma and the presence of blue-gray globules or dots in 1.09%. Seborrheic keratosis showed moth-eaten borders (9.81%), followed by a typical pigmented network (9.64%). Lentigines presented a lattice pattern (7.9%) and the presence of a typical pigmented network (7.08%). Malignant melanoma presented a blue-white veil in 1.92% of cases, comma-shaped vessels, and an atypical pigmented network in 1.36%.

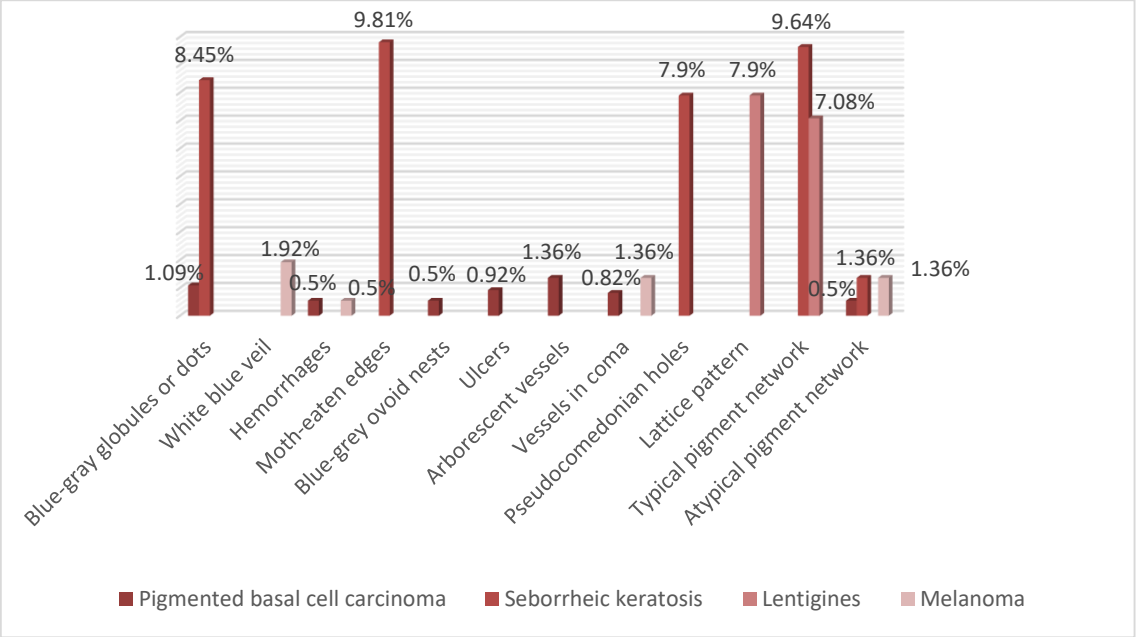

Chart 4: Dermatoscopic patterns in pigmented dermatoses.

Only 63.49% of patients required histopathological examination (Table 1). There was agreement between dermoscopy and histopathology, with PI = 97.85. The KC = 0.96 was reached, indicating very good agreement between the two techniques.

Table 1: Concordance between dermoscopy and histopathology for diagnosis

Types of dermatoses	Histopathology		Dermoscopy		IP
	No.	%	No.	%	
Basal carcinoma	83	22,62	83	22,62	100,00
Squamous cell carcinoma	10	2,72	10	2,72	100,00
Melanoma	7	1,91	7	1,91	100,00
Seborrheic keratosis	54	14,71	54	14,71	100,00
Actinic keratosis	53	14,44	53	14,44	100,00
Lichen planus	13	3,54	10	2,72	76,92
Psoriasis	8	2,18	6	1,63	75,00
Fixed discoid lupus erythematosus	5	1,36	5	1,36	100,00
Total	233	63,49	228	62,13	97,85

KC=0,96

DISCUSSION

Before the use of dermoscopy, skin tumors were diagnosed by clinical examination and skin biopsy with confirmatory histopathological examination. This implied a greater margin of diagnostic error because apparently malignant lesions corresponding to seborrheic keratosis, actinic keratosis, melanocytic nevi, common warts, solar lentigines, among others, could be unnecessarily removed.[6]

Dermoscopy and its ability to identify specific patterns in lesions, such as the presence of irregular pigmented structures, atypical vascular patterns, and asymmetrical pigment distribution, has been essential in distinguishing between benign and malignant lesions.[1]

Within the group of benign non-pigmented dermatoses, scabies stands out, a disease that has recently been on the rise due to more atypical clinical presentations that are resistant to standard treatments. Diagnosis is based on clinical features, epidemiology, and the demonstration of the parasite or its eggs in microscopic examination of scrapings from the acarine furrow. However, in atypical clinical forms, the presence of furrows on dermoscopy has allowed for differential diagnosis with dermatoses such as dermatitis.[8]

Clinically distinguishing between malignant and benign pigmented lesions can be difficult in some cases. Related to this, the dermatoses highlighted were basal cell carcinoma, which has a pigmented presentation that is difficult to distinguish from malignant melanoma. Other dermatoses that are clinically confused with melanoma include seborrheic keratosis and lentigines.

In basal cell carcinoma, the shiny reddish-white areas correspond to diffuse fibrosis of the dermis and leiostroma; and arborescent telangiectasias are one of the most frequent findings in dermoscopy, with high predictive value, since they correspond to tumor neovascularization in the form of dilated vessels in the dermis.[4]

According to the Olsen classification, actinic keratosis with a rosette pattern corresponds to grade II. This pattern is characterized by the combination of a reddish pseudoreticulum, superficial scales, fine, linear, or wavy vessels distributed perifollicularly, and prominent follicles surrounded by a white halo; however, it is not considered specific because it can be present in other lesions, resulting in chronic damage caused by ultraviolet (UV) radiation.[5]

Álvarez-Salafranca and Zaballos[5] evaluated patients with squamous cell carcinomas and their precursors, differentiating dermoscopic findings based on vascular, keratin, and pigment criteria. The presence of the rosette pattern was highlighted in actinic keratosis, as in the present study.

The coronal vessels and rosette pattern present in actinic keratosis allowed them to be differentiated from basal cell carcinoma, a very significant factor for making decisions regarding definitive treatment.

Pigmented basal cell carcinoma can present with pigmented structures such as ovoid nests, globules, and blue-gray dots. Histologically, these correspond to small tumor nests in the papillary/reticular dermis. Ulceration manifests as reddish-orange structureless areas and reflects a complete loss of the epidermis and part of the superficial dermis. Among the vascular structures, the most common are arborizing telangiectasias, which correspond to tumor neovascularization. Vascular structures common to other tumors can also be found, such as punctate, linear, hairpin, or comma vessels.[4]

In the study by Rodríguez Pino, et al.[6] they found that patients with pigmented basal carcinoma presented pigmented structures, which does not differ from the present investigation. Currently, there are well-established criteria for diagnosing seborrheic keratosis by dermoscopy, such as hairpin vessels, moth-eaten borders, pigmented net-like structures, milia, follicular plugs, fissures, ridges, and fingerprint structures.[10]

In benign lentigoes, dermoscopy shows homogeneous light brown or darker brown areas, light brown pseudo nets, a moth-eaten border, or a concave border resembling a moth bite.[10] This reticular pattern of melanocytic pigmentation is due to the presence of melanin-laden melanocytes or keratinocytes located at the dermoepidermal junction with dermal papillae and interpapillary processes.[11]

The three-point rule for melanocytic or non-melanocytic lesions is based on identifying the presence or absence of three dermoscopic criteria: global asymmetry, pigmented reticulum, and the presence or absence of pigmented reticulum. Atypical and bluish-white structures; each is assigned 0-1 points. With a score of 0-1 point, the lesion is considered benign, and with a score of 2-3 points, it is considered suspicious for malignancy.[11]

In melanoma, dermoscopy frequently reveals an atypical reticular pattern with irregular thickness; the bluish-white veil corresponds to large, confluent nests of intensely pigmented tumor cells located in the superficial dermis, veiled by accanthotic epidermis with compact orthokeratosis and hypergranulosis, in addition to branched vascular structures.[11]

In the present study, concordance was found between the dermoscopy patterns described in the literature for both non-pigmented and pigmented lesions. The correlation of some of the diagnosed dermatoses with the histopathology results largely showed that there was agreement between dermoscopy and histopathology.

In this group, basal cell carcinoma predominated, which could be explained because skin cancer continues to be the dermatosis with the greatest number of patients who come to consultation and it cannot be forgotten that, in these, the histopathological study is the definitive diagnostic test. Similar results were obtained by Gálvez Medina, et al.[12] in Havana City, related to basal cell carcinoma and dermoscopy, where it is described that 90.8% of cases were confirmed by histology.

It is certainly true that histopathology constitutes the confirmatory diagnostic technique for skin lesions, but dermoscopy is a bridge that helps bridge the gap between clinical and histological correlation.[13] Understanding this relationship allows for the correct interpretation, study, and diagnosis of skin lesions. In the study by Olvera Martínez et al.[14] there was 80.95% agreement between dermoscopy and histopathological study, considering dermoscopy a useful and reliable technique. In the present study, the agreement was greater than 85%, making it effective.

CONCLUSIONS

Dermoscopy in patients with various dermatoses allows for a more accurate diagnosis and the early detection of malignant lesions, with a positive impact on their prognosis.

BIBLIOGRPHIC REFERENCES

1. Salerni G, Cabo H. Historia de la dermatoscopia. Un viaje a través del tiempo. Derm Argent [Internet]. 2024 [cited 30 Nov 2024]; 30(2):84-88. Available at: https://www.dermatolarg.org.ar/index.php/dermatolarg/article/download/2581/1423/21052
2. Grimalt R. Utilidad de la dermatoscopia en Dermatología Pediátrica. WJD [Internet]. 2015 [cited 30 Nov 2024]; 4(2). Available at: https://scpediatria.cat/docs/ciap/2016/pdf/14_RGrimalt_CIAP2016.pdf
3. Martínez-Piva MM, Vacas AS, Rodríguez Kowalczuk MV, Gallo F, Rodrígues Vasconcelos M, Mazzuoccolo LD. La dermatoscopia como herramienta para inferir el Breslow del melanoma. Actas Dermosifiliogr [Internet]. 2021 [cited 1 Dic 2024];112(5):434-440. DOI: https://doi.org/10.1016/j.ad.2020.11.015
4. Álvarez-Salafranca M, Ara M, Zaballos P. Dermatoscopia del carcinoma basocelular: revisión actualizada. Actas Dermosifiliogr [Internet]. 2021 [cited 1 Dic 2024]; 112(4):330-338. DOI:https://doi.org/10.1016/j.ad.2020.11.011
5. Álvarez-Salafranca M, Zaballos P. Dermatoscopia del carcinoma epidermoide: de la queratosis actínica a las formas invasivas. Actas Dermosifiliogr[Internet]. 2024 [cited 1 Dic 2024];115(9):T883-T895. DOI: https://doi.org/10.1016/j.ad.2024.03.023
6. Rodríguez Pino L, Sotolongo Díaz D, Barrios González MC. Evaluación de la eficacia de la dermatoscopia para el diagnóstico del carcinoma basocelular. Acta Méd [Internet]. 2020 [cited 1 Dic 2024];14(2):152-160. Available at: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2709-79272020000200152
7. Asociación Médica Mundial. Declaración de Helsinki de la AMM-Principios éticos para las investigaciones médicas con participantes humanos [Internet]. Helsinki, Finlandia:75ª Asamblea General; 2024[consulted15 Feb 2025]. Available at: https://www.wma.net/es/polices-post/declaracion-de-helsinki-de-la-amm-principios-eticos-para-las-investigaciones-medicas-en-seres-humanos/
8. Morgado-Carrasco D, Fustà-Novell X,Rizo D, Alsina M. Nuevas tecnologías para el diagnóstico de la escabiosis: saran de

evolución tórpida con diagnóstico confirmado por microscopia con focal de reflectancia. Actas Dermosifiliogr [Internet]. 2021 [cited 1 Dic 2024];112(3):271-273. DOI: https://doi.org/10.1016/j.ad.2019.10.007

9. Marcucci C, Neira F, Gleiser J, Zemelman A, Pedrini MF, Cabo H. Criterios dermatoscópicos clásicos y accesorios de queratosis seborreica. Dermatol Argent [Internet]. 2012[cited 8 Oct 2024];18(6):487-489. Available at: https://www.dermatolarg.org.ar/index.php/dermatolarg/article/view/942
10. Small-Arana O. Lentigo benigno facial: manejo quirúrgico a propósito de un caso. Dermatol Perú [Internet]. 2014 [cited 8 Oct 2024]; 24(3). Available at: https://repebis.upch.edu.pe/articulos/dermatol.peru/v24n3/a9.pdf
11. Palacios-Martínez D, Díaz-Alonso RA. Dermatoscopia para principiantes (II):estructuras dermatoscópicas y métodos diagnósticos. SEMERGEN [Internet]. 2017 [cited 2 Dic 2024];43(4):312-317. DOI: http://dx.doi.org/10.1016/j.semerg.2015.11.010
12. Gálvez Medina DM, Lobaina Mejías YL, MassipNicot J, Fernández González L, Tenorio Morión CO. Leyva Duthil D.Carcinoma basocelular diagnosticado por dermatoscopia en consulta de dermatología del Hospital Universitario Miguel Enríquez. Finlay [Internet]. 2023 [cited 2 Dic 2024];13(3):320-330. Available at: https://revfinlay.sld.cu/index.php/finlay/article/view/1230
13. Zubiría Fernández R, Muñoz Camacho MI, Lira TognolaKS, Garibaldi BernotM. Carcinoma basocelular de localización infrecuente: reporte de caso y revisión de la literatura. DermatolCosMedQuir [Internet]. 2024 [cited 1 Oct 2024]; 22(1):67-74. Disponible desde: https://www.medigraphic.com/pdfs/cosmetica/dcm-2024/dcm241n.pdf
14. Olvera Martínez M, Campos Moyano M, Herrera Carrasco AM, Romero Nimo Y, Pilares Puertas JA. Estudio descriptivo del uso del dermatoscopio por enfermería en el diagnóstico precoz de lesiones cutáneas. HygiaEnfermer [Internet]. 2023 [cited 8 Oct 2024]; 40(1):5-11. Available at: https://revistahygia.es/pdf/40-1/Hygia-de-Enfermeria-2023-volumen-40-tomo-1-pp-5-11.pdf

Conflicts of Interests:
The authors declare no conflicts of interest.

Author Contributions:
Erlinda Ricardo Mora: conceptualization, data curation, formal analysis, research, methodology, project administration, validation, supervision, visualization, writing - original draft, writing - review, and editing. Alibé Ortiz José: conceptualization, data curation, research, validation, visualization, writing - original draft, writing - review, and editing. Yordania Velázquez Avila: conceptualization, data curation, research, methodology, project administration, validation, visualization, writing - original draft, writing - review, and editing.

Financing:
No funding was received for the development of this article.

Supplementary File (Open Data):
Base de datos de Caracterización de lesiones cutáneas mediante dermatoscopia en el Hospital General Docente Dr. Ernesto Guevara de la Serna, Las Tunas, Cuba