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Dermatoscopic "Mimickers" of Basal Cell Carcinoma - Adnexal Skin Tumors

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Abstract

Background: Adnexal skin tumors (AST) are numerous and various, and in their appearance give dermoscopic and clinical features similar to basal cell carcinoma (BCC). Differential diagnosis is difficult, as clinical alteration seems insufficient to distinguish between BCC and many skin lesions that mimic BCC. However, the validity and usefulness of dermatoscopic criteria enable differentiation between BCC and AST. The purpose of this paper was to present the basic dermatoscopic criteria for diagnosis of BCC as well as minimally invasive methods for treatment and clinical management, with a better aesthetic outcome.

Methods and Results: This study consisted of a retrospective review of 50 skin lesions collected in our institution over a 3-year period. We analyzed the dermoscopic images of 29 skin lesions with a clinical diagnosis of BCC and 21 cases with a clinical diagnosis of AST. All lesions were assessed for the presence of various dermatoscopic criteria using a manual photo dermatoscopy system DermLite (DermLite 3, Gen). Each case was evaluated by the presence of dermatoscopic features. We compared dermatoscopic and clinical features between the BCC and AST groups.

In the AST group, there were 5(23.8%) premalignant and 16(76.2%) benign lesions. Compared to the AST group, the BCC group had a significantly higher frequency of dermatoscopic features (vascular pattern, ulceration, and additional dermatoscopic features). All lesions included in this study showed more than one of the following characteristics of BCC: arborizing vessels, short fine telangiectasia, translucency, ulceration, blue-gray globules, flecked pigmentation, and rolled borders. Cutaneous lesions with 2 or fewer dermatoscopic features of BCC were much more likely to be an adnexal tumor.

***Conclusion*:** The results of this study could be valuable for the differential diagnosis of BCC and BCC-mimicking cutaneous lesions, because dermatoscopy can be especially helpful in better describing, recognizing, and differentiating these lesions. **(International Journal of Biomedicine. 2022;12(4):671-674.)**.

Keywords: adnexal skin tumor • basal cell carcinoma • differential diagnosis

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Abbreviations

AST, adnexal skin tumors; **BCC**, basal cell carcinoma; **TCA**, trichloroacetic acid; **PL**, Plasma Light.

Introduction

Basal cell carcinoma (BCC) is the most common type of skin cancer and the most common neoplasm in humans.[1,2] Adnexal skin tumors (AST) are numerous and various, and in their appearance give clinical and dermatoscopic features similar to BCC, which makes differential diagnosis difficult.

Dermatoscopy is a better tool for evaluating pigmented skin lesions because it gives a magnified view of the skin layers, allowing visualization of key vascular structures that are usually not visible to the naked eye. Therefore, the dermatoscope is our third eye that connects macroscopic clinical dermatology and microscopic dermatopathology.[3] Moreover, it is essential to practice dermatoscopy at every opportunity because it provides a quick diagnosis based on specific dermatoscopic criteria.[4-8] Additionally, good knowledge of the structure and dermatoscopic criteria of BCC and their more efficient diagnosis leads to more accurate and

faster diagnoses than histopathological findings.[9-11] Most adnexal tumors are derived from hair follicles, but other ones can come from eccrine ducts or apocrine glands. AST are usually mimickers of BCC. Trichoepithelioma, pilomatricoma, epidermoid cysts, and sebaceous glands are just a few of the entities reported to dermatoscopically exhibit linear branching vessels and blue-gray globules, similar to those seen in BCC.[12-15] Arborizing telangiectasias are the typical dermoscopic feature of BCC and are common in adnexal neoplasms. Trichoepithelioma, lesions derived from the hair follicles, can be single or multiple, appearing on the face after puberty. They are filled with keratin. Indications for removal are for clinical and pathological diagnosis if there is any suspicion of malignant change.

Epidermoid sebaceous cysts are follicular nodules with a central punctum, filled with keratin, lined with stratified squamous epithelium, and of various sizes. Indications for removal are cosmetic defect and recurrent infection. Removal techniques are surgical excision with dissection, small incision (PL or 2-3 mm punch biopsy), and expression of the cyst contents and wall with pressure.

Sebaceous gland hyperplasia is a common condition of the sebaceous gland when too much oil is produced. It can be flat or slightly raised, which is not harmful. Laser surgery, fractional CO_2, excision surgery, chemical peels with TCA, retinol, and cryosurgery are treatments.[16-18] However, the value and utility of dermatoscopic data are that they enable us to distinguish between BCC and adnexal tumors. The differential diagnosis can be facilitated by the observation that the vessels of adnexal tumors are usually less focused, and pinkish-red in color. Yellow structures are very suggestive of sebaceous tumors and can help to differentiate them from other tumors that show arborizing vessels.[3]

The purpose of this paper was to present the basic dermatoscopic criteria for diagnosis of BCC as well as minimally invasive methods for treatment and clinical management, with a better aesthetic outcome.

Materials and Methods

This study consisted of a retrospective review of 50 skin lesions collected in our institution over a 3-year period. We analyzed the dermoscopic images of 29 skin lesions with a clinical diagnosis of BCC and 21 cases with a clinical diagnosis of AST. Inclusion criteria were histopathologic diagnosis of BCC and AST, the availability of clinical, dermatoscopic, and histopathology findings. The exclusion criteria were any diagnostic entity other than BCC and AST. Clinical data were obtained for each patient, including age and sex, location, and clinical appearance of the lesion. All lesions were assessed for the presence of various dermatoscopic criteria using a manual photo dermatoscopy system DermLite (DermLite 3, Gen). Each case was evaluated by the presence of dermatoscopic features. We compared dermatoscopic and clinical features between the BCC and AST groups.

In the AST group, there were 5(23.8%) premalignant and 16(76.2%) benign lesions. Compared to the AST group, the BCC group had a significantly higher frequency of dermatoscopic features (vascular pattern, ulceration, and additional dermatoscopic features). All lesions included in this study showed more than one of the following characteristics of BCC: arborizing vessels, short fine telangiectasia, translucency, ulceration, blue-gray globules, flecked pigmentation, and rolled borders. Cutaneous lesions with 2 or fewer dermatoscopic features of BCC were much more likely to be an adnexal tumor.

Ethical Approval

The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of the University Clinical Center, Pristina, Kosovo. All participants provided written informed consent.

Case Presentation 1

We present the case of a 56-year-old male patient with a round tumor behind the left ear, completely asymptomatic. This formation was round and symmetrical, 9mm in diameter, and the skin covered it except for a more pronounced vascular plexus (Figure 1a). On dermoscopic examination (DermLite Photo, 3Gen) using ultrasound gel as interface fluid, we could see branched vessels anastomoses from different calibers, located everywhere, and a red-pink lesion (Figure 1b). This is a classic clinical and dermoscopic epidermoid cyst. The yellowish-white structures would not be seen in BCC. Arborizing or "basal cell-like" vessels surrounding lesions but never reaching the center are typical for sebaceous cysts. It was decided to carry out treatment (Figure 1c) and take the biomaterial to establish the diagnosis. Through a small incision made by PL, we obtained copious whitish, pasty materials. The cyst contents and walls, as well as the clinical image after treatment, are present in Figure 1. Histopathology showed a cystic wall made up of a squamous epithelium thin cells and traces of keratin corresponding to an epidermal cyst.

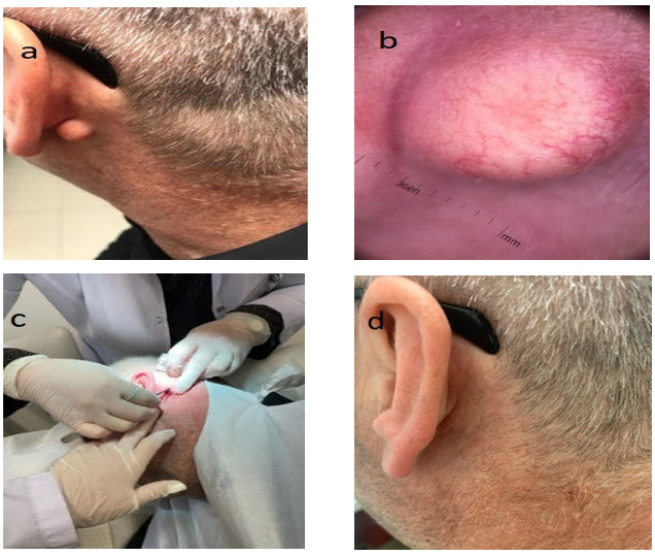

Fig. 1. *(a): Clinical image; (b): Dermoscopic image of the lesion; (c): Clinical treatment; (d): After treatment.*

Case Presentation 2

A round erythematous nodule in the *apex nasi lateral sinistra* appeared in a 25-year-old woman (Figure 2a). Dermatoscopy: a lesion with the presence of arborizing vessels, with the red-pink color of telangiectasias located on the epidermal cysts (Figure 2b). This picture can help differentiate them from the red vessels of other skin tumors, especially of BCC, and additionally show more white structureless and multiple milia-like cysts of keratin; these form the white clods. Multiple milia-like cysts are not seen in BCC and are typically clinical and dermoscopic signs of trichoepithelioma.

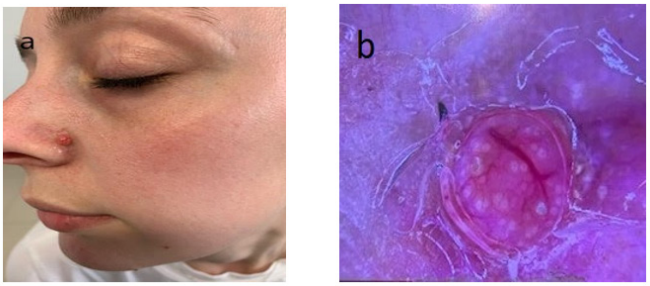

Fig. 2. *(a): Clinical image; (b): Dermoscopic image of the lesion.*

Case Presentation 3

A 73-year-old man had developed a new lesion on his forehead 9 months ago (Figure 3A). Dermoscopy of the lesion (Figure 3B) revealed the yellowish-white globules that are not seen in BCC. “Crown” or “basal cell-like” vessels seen in sebaceous gland hyperplasia surround and penetrate the lesion but never reach the center. It was decided to perform biopsy punches (3mm) to establish the diagnosis. Histopathological description of the lesion: the covering epithelium is squamous with the pigmentation of the cells of the basal layer. Signs of solar elastosis are observed in the reticular dermis. In the deeper layers, hyperplasia of the sebaceous glands is observed.

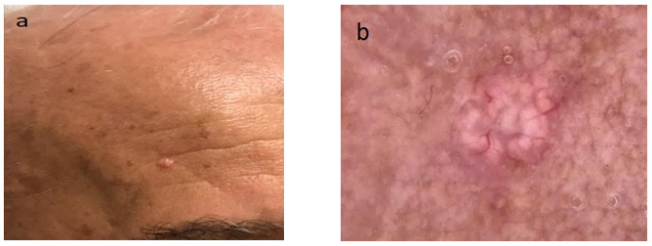

Fig. 3. *(a): Clinical image; (b): Dermoscopic image of the lesion*

Conclusion

The results of this study could be valuable for the differential diagnosis of BCC and BCC-mimicking cutaneous lesions. because dermatoscopy can be especially helpful in better describing, recognizing, and differentiating these lesions. Finally, we must be sure of the clinical diagnosis before any intervention. The dermoscopic examination is necessary for evaluating the measurement and finding of specific dermoscopic criteria, which are important to evaluate and show the value of applying dermatoscopy as a preoperative diagnostic method of treating skin lesions.

Competing Interests

The authors declare that they have no competing interests.

References

1. Del Busto-Wilhelm I, Malvehy J, Puig S. Dermoscopic criteria and basal cell carcinoma. G Ital Dermatol Venereol. 2016 Dec;151(6):642-648.
2. Álvarez-Salafranca M, Ara M, Zaballos P. Dermoscopy in Basal Cell Carcinoma: An Updated Review. Actas Dermosifiliogr (Engl Ed). 2021 Apr;112(4):330-338.. doi: 10.1016/j.ad.2020.11.011. [Article in English, Spanish]
3. Wozniak-Rito A, Zalaudek I, Rudnicka L. Dermoscopy of basal cell carcinoma. Clin Exp Dermatol. 2018 Apr;43(3):241-247. doi: 10.1111/ced.13387.
4. Enache AO, Pătrașcu V, Simionescu CE, Ciurea RN, Văduva A, Stoica LE. Dermoscopy Patterns and Histopathological Findings in Nodular Basal Cell Carcinoma-Study on 68 Cases. Curr Health Sci J. 2019 Jan-Mar;45(1):116-122. doi: 10.12865/CHSJ.45.01.16.
5. Lallas A, Apalla Z, Argenziano G, Longo C, Moscarella E, Specchio F, Raucci M, Zalaudek I. The dermatoscopic universe of basal cell carcinoma. Dermatol Pract Concept. 2014 Jul 31;4(3):11-24. doi: 10.5826/dpc.0403a02.
6. Zalaudek I, Kreusch J, Giacomel J, Ferrara G, Catricalà C, Argenziano G. How to diagnose nonpigmented skin tumors: a review of vascular structures seen with dermoscopy: part II. Nonmelanocytic skin tumors. J Am Acad Dermatol. 2010 Sep;63(3):377-86; quiz 387-8. doi: 10.1016/j.jaad.2009.11.697.
7. Kittler H, Pehamberger H, Wolff K, Binder M. Diagnostic accuracy of dermoscopy. Lancet Oncol. 2002 Mar;3(3):159-65. doi: 10.1016/s1470-2045(02)00679-4.
8. Lupu M, Caruntu C, Popa MI, Voiculescu VM, Zurac S, Boda D. Vascular patterns in basal cell carcinoma: Dermoscopic, confocal and histopathological perspectives. Oncol Lett. 2019 May;17(5):4112-4125. doi: 10.3892/ol.2019.10070.
9. Sgambato A, Zalaudek I, Ferrara G, Giorgio CM, Moscarella E, Nicolino R, Argenziano G. Adnexal tumors: clinical and dermoscopic mimickers of basal cell carcinoma. Arch Dermatol. 2008 Mar;144(3):426. doi: 10.1001/archderm.144.3.426.
10. Al Mushcab N, Husain R, Al Subaiei M, Al Qarni A, Abbas A, Al Duhileb M. Trichoblastoma mimicking basal cell carcinoma and the approach to its management: Case report.

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Int J Surg Case Rep. 2021 Sep;86:106318. doi: 10.1016/j.ijscr.2021.106318.
11. Zaballos P, Serrano P, Flores G, Bañuls J, Thomas L, Llambrich A, Castro E, Lallas A, Argenziano G, Zalaudek I, del Pozo LJ, Landi C, Malvehy J. Dermoscopy of tumours arising in naevus sebaceous: a morphological study of 58 cases. J Eur Acad Dermatol Venereol. 2015 Nov;29(11):2231-7. doi: 10.1111/jdv.13226.
12. Zaballos P, Gómez-Martín I, Martin JM, Bañuls J. Dermoscopy of Adnexal Tumors. Dermatol Clin. 2018 Oct;36(4):397-412. doi: 10.1016/j.det.2018.05.007.
13. Lai M, Muscianese M, Piana S, Chester J, Borsari S, Paolino G, Pellacani G, Longo C, Pampena R. Dermoscopy of cutaneous adnexal tumours: a systematic review of the literature. J Eur Acad Dermatol Venereol. 2022 Sep;36(9):1524-1540. doi: 10.1111/jdv.18210.
14. Carbotti M, Coppola R, Graziano A, Verona Rinati M, Paolilli FL, Zanframundo S, Panasiti V. Dermoscopy of verrucous epidermal nevus: large brown circles as a novel feature for diagnosis. Int J Dermatol. 2016 Jun;55(6):653-6. doi: 10.1111/ijd.12948.
15. Oyasiji T, Tan W, Kane J 3rd, Skitzki J, Francescutti V, Salerno K, Khushalani NI. Malignant adnexal tumors of the skin: a single institution experience. World J Surg Oncol. 2018 May 30;16(1):99. doi: 10.1186/s12957-018-1401-y.
16. Sharma A, Paricharak DG, Nigam JS, Rewri S, Soni PB, Omhare A, Sekar P. Histopathological study of skin adnexal tumours-institutional study in South India. J Skin Cancer. 2014;2014:543756. doi: 10.1155/2014/543756.
17. Radhika K, Phaneendra BV, Rukmangadha N, Reddy MK. A study of biopsy confirmed skin adnexal tumors: experience at a tertiary care teaching hospital. Journal of Clinical and Scientific Research. 2013;2:132–138.
18. Samaila MO. Adnexal skin tumors in Zaria, Nigeria. Ann Afr Med. 2008 Mar;7(1):6-10. doi: 10.4103/1596-3519.55691.