Asian Journal of Research in Dermatological Science

Volume 7, Issue 1, Page 24-27, 2024; Article no.AJRDES.115217

A Case Report about Coexistence of Pigmented Bowen's Disease and Cutaneous Capillary Malformation: Unusual Case with Dermatoscopic Findings

Meryem Elomari Alaoui [a*], Amani Fliti [a], Narjess Er-Rachdy [a], Mariame Meziane [a], Nadia Ismaili [a], Laila Benzekri [a] and Karima Senouci [a]

[a] Department of Dermatology and Venerology, University Hospital Center Ibn SINA, University Mohamed V, Rabat, Morocco.

Authors' contributions

This work was carried out in collaboration among all authors. Authors MEA, AF and NE reviewed, treated, and followed the patient. Authors MM, NI, LB and KS revised the manuscript. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/115217

Case Study

Received: 27/01/2024
Accepted: 01/04/2024
Published: 05/04/2024

ABSTRACT

Capillary malformation and Bowen's disease (BD) or intraepidermal squamous cell carcinoma are two different entities whether clinically, histologically or prognostically.
Bowen's disease or squamous cell carcinoma in situ is a precursor malignant neoplasm restricted to the epidermis.
Capillary malformations are cutaneous vascular anomalies caused by dysregulation of vascular channel formation during embryogenic development.

**Corresponding author: E-mail: elomarim077@gmail.com;*

The coexistence of a cutaneous capillary malformation with a skin malignancy is reported only once before by E.Bostan et al, that's why we will present this case which associates these two entities: cutaneous capillary malformation and pigmented Bowen in the same location which has never been described.

Keywords: Bowen; capillary malformation; coexistence.

1. INTRODUCTION

"Capillary malformations are relatively often cutaneous vascular anomalies caused by dysregulation of vascular channel formation during embryogenic development. It may be the only cutaneous sign of an underlying neurocutaneous or overgrowth syndrome such as Sturge- Weber syndrome" [1].

"Bowen's disease, also known as squamous cell carcinoma in situ (SCCIS), is defined by a precursor malignant neoplasm that remains confined to the epidermis and without evidence of dermal invasion" [2].

To the best of our knowledge, coexistence of a cutaneous capillary malformation with a skin malignancy is reported only once before. Herein, we present a case of cutaneous capillary malformation in a patient who had a pigmented Bowen in the same location.

2. CASE REPORT

2.1 Clinical Presentation

A 64-year-old woman with no significant pathological history consulted to the dermatology department for a pink-red bleeding nodule on the lower third of her back associated with a scaly plaque that had been evolving for years and is progressively increasing in size.

2.2 Dermatological Examination

Dermatological examination of both lesions revealed respectively a fragile, pink-red nodule measuring approximately 15 mm × 10 mm and nearby a slightly variegated brown plaque, sharply delineated, measuring 30mm × 20mm, with surface scale. (Fig. 1)

2.3 Dermoscopic Examination

Dermoscopic examination of the nodule showed a peripheral whitish scale accompanied by a polymorphic vascular pattern on a diffuse milky red/white area without structure (Fig. 2), in contrast dermoscopic examination of the brown plaque revealed a red-yellow background, small brown globules/dots arranged in patches or lines and white scales suggesting the diagnosis of Bowen (Fig. 3).

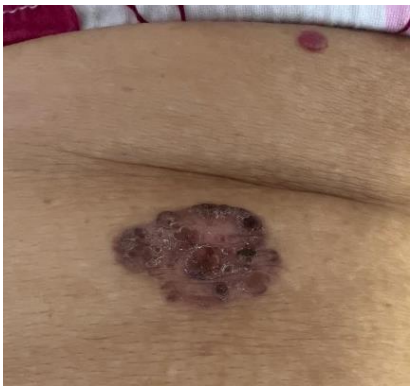

Fig. 1. Slightly variegated brown plaque with clear demarcation associated with pink-red nodule on the back

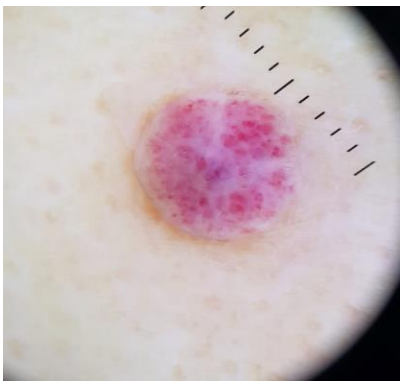

Fig. 2. Dermoscopic examination showed a peripheral whitish scale accompanied by a polymorphic vascular pattern on a diffuse milky red/white area without structure

2.4 Histological Examination

The 2 lesions were surgically removed and histological examination of the plaque revealed acanthosis with large abnormal squamous cells, a hyperchromatic nucleus, mitoses and cytonuclear atypia throughout the dermis, but not extending beyond the MB, consistent with the

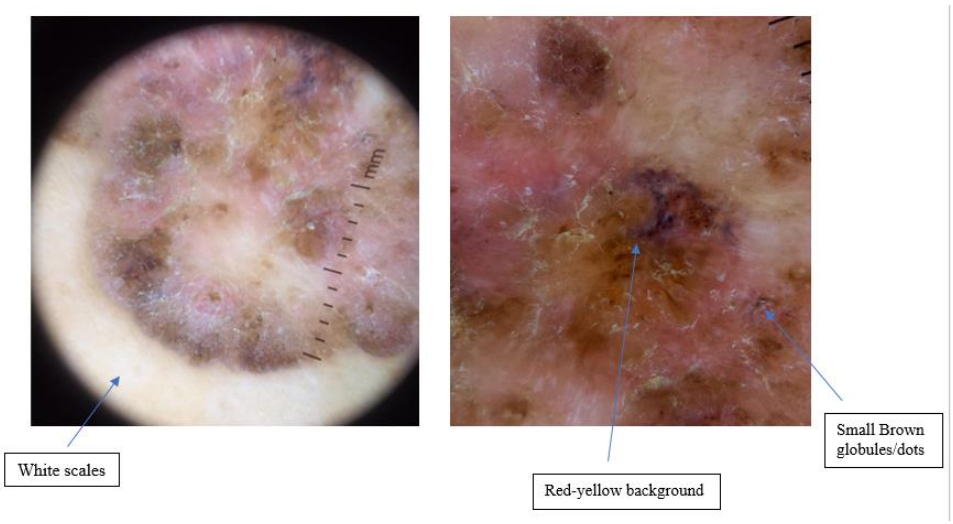

Fig. 3. Dermoscopic examination revealed a red-yellow background, small brown globules/dots arranged in patches or lines and white scales

diagnosis of squamous cell carcinoma in situ or Bowen disease. Histological examination of the nodule showed a capillary malformation.

3. DISCUSSION

"To the best of our knowledge, coexistence of a cutaneous capillary malformation with a skin malignancy is reported only once before that associated a plantar amelanotic melanoma and capillary malformation" [3]. On the other hand, Bowen's association with capillary cutaneous malformation has never been described, and our case is the first to describe this association.

"Bowen's disease or squamous cell carcinoma in situ is a precursor malignant neoplasm restricted to the epidermis" [4]. "Clinically it most commonly presents as a pink scaly plaque. In Caucasians, exposure to ultraviolet radiation is the dominant causative factor, but exposure to chemicals (most notably arsenic), immunosuppression (particularly iatrogenic in organ transplantation), and infection with human papillomavirus have also been implicated" [5]. "The pigmented variant of BD has been considered rare, and presents clinically as a nonuniformly pigmented plaque with a scaly or verrucous surface that should be differentiated from seborrheic keratosis, pigmented actinic keratosis, solar lentigo, basal cell carcinoma, blue naevus, melanocytic naevi and melanoma" [6-7].

"Glomerular vessels plus a scaly surface were the most frequent combination of criteria in pigmented and non-pigmented Bowen Disease (BD). In pigmented BD, small brown globules and/or homogeneous pigmentation can be seen in addition" [8].

Lichen simplex chronicus, psoriasis, eczema or superficial basal cell carcinoma (BCC) can be the clinical differential diagnosis of SCCIS. So, the final diagnosis is based on histological examination, which may show epidermal atypia with disordered architecture, abnormal mitoses, and dyskeratosis, but this disorganization does not penetrate into the dermis, and the dermo epidermal junction is intact [9].

Since Bowen is a malignant lesion, it is essential to look for other suspicious lesions, both clinically and dermoscopically. And in our patient, we found an associated capillary malformation. "They are clinically observed as reddish to purple macules, patches, or plaques". (10) Gandon et al described "dermatoscopic features of capillary malformations which most commonly demonstrated branched linear vessels upon a diffuse brown background in four patients" [11].

5. CONCLUSION

The coexistence of capillary malformation and bowen diseases with dermatoscopic features has not been reported before, hence the need for a complete clinical and dermoscopic examination in the presence of a suspicious lesion to search for and objectify possible associations.

ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

CONSENT

As per international standards or university standards, patient(s) written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. McCuaig CC. Update on classification and diagnosis of vascular malformations. Curr Opin Pediatr. 2017;29:448-54.
2. Arlette JP, Trotter MJ. Squamous cell carcinoma in situ of the skin: history, presentation, biology and treatment. Australas J Dermatol. 2004;45(1):1-9; quiz 10.
   DOI:10.1111/j.1440-0960.2004.00025.x
   PMID: 14961900.
3. Bostan E, Dogan S, Ates Ozdemir D, Elcin G. Coexistence of amelanotic melanoma and capillary malformation on the same sole: An unusual case with dermatoscopic findings. Int Wound J. 2020;17(4):1083-1085.
   DOI: 10.1111/iwj.13355.
   Epub 2020 Mar 30.
   PMID: 32227568; PMCID: PMC7948684.
4. Liang DG, Soliman B, Cha J. A rare case of Bowen's disease of the nipple: Literature review and management pathway. The Breast Journal.doi:10.1111/tbj.13824 Liang DG, Soliman B, Cha J. A rare case of Bowen's disease of the nipple: Literature review and management pathway. Breast J. 2020;26(6):1234-1238.
   DOI: 10.1111/tbj.13824.
   Epub 2020 Mar 24. PMID:32212188
5. Cameron A, Rosendahl, C, Tschandl P, Riedl E, Kittler, H. Dermatoscopy of pigmented Bowen's disease. Journal of the American Academy of Dermatology. 2010;62(4):597–604.
   DOI:10.1016/j.jaad.2009.06.008
6. Ragi G, Turner MS, Klein LE, Stoll HL Jr. Pigmented Bowen's disease and review of 420 Bowen's disease lesions. J Dermatol Surg Oncol. 1998;14:765–9.
7. Krishnan R, Lewis A, Orengo IF, Rosen T. Pigmented Bowen's disease (squamous cell carcinoma in situ): A mimic of malignant melanoma. Dermatol Surg. 2001;27:673–4.
8. Zalaudek I, Argenziano G, Leinweber B, Citarella L, Hofmann-Wellenhof R, Malvehy J, Kerl H. Dermoscopy of Bowen's disease. British Journal of Dermatology. 2004;150(6):1112–1116.
   DOI:10.1111/j.1365-2133.2004.05924.x
9. Arlette JP, Trotter MJ. Squamous cell carcinoma in situ of the skin: History, presentation, biology and treatment. Australasian Journal of Dermatology. 2004 ;45(1) :1–11.
   DOI:10.1111/j.1440-0960.2004.00025.x
10. Wassef M, Blei F, Adams D, et al. Vascular anomalies classification: Recommendations from the international society for the study of vascular anomalies. Pediatrics. 2015;136:e203-e214.
11. Gandon C, Bonniaud B, Collet E, Dalac S, Jeudy G, Vabres P. A typical vascular and pigmentary dermoscopic pattern of capillary malformation in capillary malformation-arteriovenous mal- formation syndrome: Report of four cases. Pediatr Dermatol. 2016;33:e337-e341.

Peer-review history:
The peer review history for this paper can be accessed here:
https://www.sdiarticle5.com/review-history/115217