

Talon noir: dermoscopy assisted differential diagnosis of pigmented lesions

Talon noir: auxílio da dermatoscopia no diagnóstico diferencial de lesão pigmentada

ABSTRACT

Talon noir was first described in 1961 by Peachey as atraumatic petechial eruption characteristic of basketball players' heels, and were originally called calcaneal petechiae. It is a dermatosis linked to trauma, with asymptomatic lesions, marked by the presence of blood within the stratum corneum. It presents varied clinical manifestations, with the location depending on the involved provocative factor. The present study describes a case of talon noir in a patient with psoriasis vulgaris and demonstrates the importance of the correlation of clinical, dermoscopic, and histopathological characteristics.

Keywords: blood stains, nevi and melanomas, foot.

RESUMO

Talon noir foi descrita pela primeira vez em 1961 por Peachey, como erupção petequial traumática característica dos saltos dos jogadores de basquete e originalmente chamada de petéquias do calcâneo. É dermatose relacionada ao trauma, com lesões assintomáticas e marcada pela presença de sangue dentro do estrato córneo. Apresenta manifestações clínicas variadas e sua localização depende do fator provocativo envolvido. Os autores apresentam caso de talon noir em paciente com psoríase vulgar e demonstram a importância da correlação das características clínicas, dermatoscópicas e histopatológicas.

Palavras-chave: manchas de sangue; nevos e melanomas; pé.

INTRODUCTION

Talon noir is a dermatosis that presents with an asymptomatic petechial lesion, trauma-related and mostly found in acral body sites. It is histologically characterized by blood within the stratum corneum.¹ Since its initial description, it has been referred to by several names (Chart 1), with the lesion's description primarily relating to the affected body site and provocative factor.²

The most typical appearance of this clinical entity is the presence of coalescing macules forming a blackened purpuric plaque. It was precisely this appearance that gave rise to the denomination of the dermatosis, termed by the French dermatologist Peachey as *talon noir*, which means black heel.³ Its pathogenesis is of traumatic origin, and the lesion is caused by excessive tangential pressure applied to the skin. Although it is characteristically bilateral and located in the heels, it can be found on any acral surface.^{4,5}

Scarification of the lesion with a scalpel blade allows the detachment of thin layers of pigmented skin that can be evaluated with the aid of dermoscopy or sent for histologic analysis.¹ Carrying out a dermoscopy of the lesion is another valuable tool in the diagnosis, for it offers findings that suggest the presence of blood in the stratum corneum.^{6,7} Diagnostic confirma-

Diagnostic imaging

Authors:

Fred Bernardes Filho¹
 Maria Victória Quaresma¹
 Karoline Silva Paolini²
 Natalia de Carvalho Rocha²
 Bernard Kawa Kac³
 Luna Azulay-Abulafia⁴

¹ Dermatology Graduate Degree Candidate, Instituto de Dermatologia Professor Rubem David Azulay da Santa Casa da Misericórdia do Rio de Janeiro—Rio de Janeiro (RJ), Brazil.

² Physician, Universidade Iguazu (Unig)—Rio de Janeiro RJ, Brazil.

³ Dermatopathology Consultant, Instituto de Dermatologia Professor Rubem David Azulay da Santa Casa da Misericórdia do Rio de Janeiro.

⁴ Associate Instructor at the Universidade do Estado do Rio de Janeiro (UERJ)—Rio de Janeiro (RJ) and at the Graduate Degree Program of the Instituto de Dermatologia Professor Rubem David Azulay da Santa Casa da Misericórdia do Rio de Janeiro.

Correspondence:

Dr. Fred Bernardes Filho
 Rua Marquês de Caxias, 9, Sobrado, Centro.
 24030-050 – Niterói - RJ
 Brazil
 Email: f9filho@gmail.com

Received on: 22 May 2013

Approved on: 15 June 2013

The present study was carried out at the Instituto de Dermatologia Professor Rubem David Azulay da Santa Casa da Misericórdia do Rio de Janeiro.

Financial support: None
 Conflict of interest: None

CHART 1: Terms used in the medical literature to describe lesions with the presence of blood in the stratum corneum

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> • Calcaneal Petechiae • Post-traumatic punctate hemorrhage of the skin • Tennis player's heel • Disseminated punctate intraepidermal hemorrhage • Black palmar macule • Plantar chromhidrosis | <ul style="list-style-type: none"> • Black heels • Traumatic purpura of the feet • Tennis player's toe • Subcorneal hematoma • Black palm • Pseudochromhidrosis | <ul style="list-style-type: none"> • Talon noir • Basketball player's heel • Hyperkeratotic hemorrhage • Pigmented palmar petechiae • Playstation player's thumb |
|--|---|---|

Source: Urbina F, et al. 2008¹

tion is given by the histopathology, which may reveal hyperkeratosis, presence of blood in the stratum corneum and extravasated erythrocytes in the papillary dermis.¹

The main differential diagnosis is the presence of melanocytic proliferation, with melanoma being the most important clinical differential diagnosis.^{1,6} Close inspection is crucial for ruling out simultaneous melanocytic tumor. No treatment is necessary, for the lesions tend to disappear spontaneously.^{1,2}

The present case report is aimed at demonstrating the clinical, dermoscopic, and histopathologic features of this condition, and issuing an alert regarding the importance of including it in the differential diagnosis of lesions that occur in the relevant topography.

CASE REPORT

A 65-year-old male patient sought the dermatology ambulatory due to the exacerbation of psoriasis lesions and for being off treatment for two years. For roughly two weeks he had had an asymptomatic blackened macular lesion in the fifth right toe, referring no recollection of local trauma.

Etoscopic examination evidenced psoriasiform plaques on the trunk, dorsum, and limbs. The patient had a single red-blackish macula in the medial region of the distal phalanx of the fifth right toe (Figure 1). Dermoscopic analysis verified a homogeneous global pattern with red-blackish color pigment, with the presence of hemorrhage minute punctate macules in the periphery (Figure 2). The following hypotheses have been suggested: *talon noir* and atypical nevus. Scarification of the macula was carried out, resulting in the detachment of blackish colored skin layers (Figure 3). A biopsy of the lesion was performed in order to confirm the diagnosis, and histology revealed fibrin, hemosiderin's ocher pigment, and degenerated erythrocytes



FIGURE 1: Blackened macula with well defined limits in the distal phalanx of the fifth right toe



FIGURE 2: Dermoscopy: red-blackish pigment; homogeneous global pattern, with some punctate hemorrhage macules on the periphery

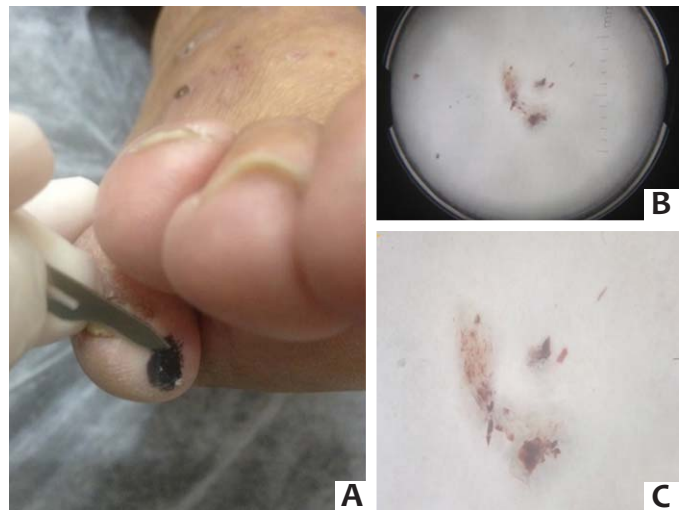


FIGURE 3: a) Scarification of the lesion's surface with a scalpel blade. b) Material resulting from the scarification. c) Thin layers of skin of red-blackish color.

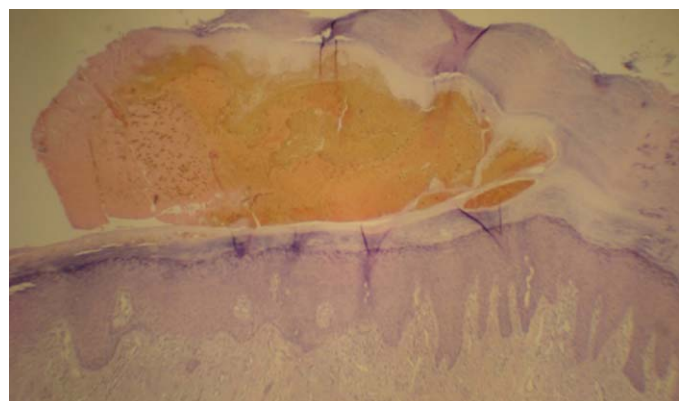


FIGURE 4: Fibrin, hemosiderin's ocher pigment and degenerated erythrocytes trapped in the lower third of the stratum corneum; the remainder of the epidermis is unaltered

trapped in the lower third of the stratum corneum. The remainder of the epidermis had no alteration (Figure 4).

Thus, associating the clinical aspect to the scarification related, dermoscopic, and histopathologic findings, a diagnosis of *talon noir* was established. The authors instructed the patient about the benign nature of the picture and in the six-week return visit, verified the spontaneous disappearance of the lesion.

DISCUSSION

Dermoscopy increasingly gains more importance in the clinical practice, with an increasing number of indications.⁸ This diagnostic method allows the physician to recognize the morphological structures of pigmented skin lesions that can determine whether their nature is melanocytic or not, adding a new dimension to the clinical examination.^{7,9}

In the dermoscopy, the pigmentation seen in lesions in which there is subcorneal hematoma usually has a slightly lighter appearance, revealing a reddish hue. Most often, the overall pattern observed is homogeneous or globular, nevertheless in

some cases the pigment may be distributed along the crests, lending a parallel aspect, which makes it even more difficult to differentiate the lesion from acral melanoma.⁷ In the present case, in addition to the already described dermoscopic features, the authors verified the presence of peripheral hemorrhagic punctate macules.

In some cases, the lesion's color may provide clues to their timing and development. The extravasated blood will be reabsorbed, causing chromatic variation from the outset of the condition to the full recovery of the lesion. This variation in hue is known as the Legrand du Saulle ecchymotic spectrum (see Chart 2) and has an important value in forensic traumatology.¹⁰ Due to anatomical peculiarities, some body sites such as the ocular conjunctiva, fingers, and palmoplantar regions do not present ecchymotic spectrum.¹⁰

The authors propose that in the presence of dermoscopic findings suggestive of subcorneal hematoma in a patient who presented local trauma, an expectant approach can be taken for 30 days to evaluate the development. The occurrence of spontaneous regression is consistent with the diagnosis of *talon noir*. In the present case, by considering the hypothesis of melanocytic lesion, and due to the fact that the patient did not remember having had a trauma in the relevant site, the authors chose to perform an incisional biopsy for diagnostic confirmation.

The authors emphasize the importance of adding *talon noir* to the differential diagnosis of melanocytic lesions, including melanoma, and suggest the use of dermoscopy as an auxiliary method in the diagnosis. ●

CHART 2: Legrand du Saulle ecchymotic spectrum

Chromatic alterations	Development (in days)
Dark red	First day
Violet	Second and third days
Bluish	From the 4th to the 6th day
Dark green	From the 7th to the 10th day
Yellowish-green	From the 11th to the 12th days
Yellow	From the 13th to the 17th day
Natural color of the neighboring epidermis	After the 20th day

REFERENCES

1. Urbina F, Leon L, Sudy E. Black heel, talon noir or calcaneal petechiae? *Australas J Dermatol*. 2008;49(3):148-51.
2. Tloutan BE, Mancini AJ, Mandell JÁ, Sanchez MR. Skin conditions in figure skaters, ice-hockey players and speed skaters: part I - mechanical dermatoses. *Sports Med*. 2011;41(9):709-19.
3. Crissey JT, Peachey JC. Calcaneal petechiae. *Arch Dermatol*. 1961;83:501.
4. Yaffee H. Talon noir. *Arch Dermatol*. 1971;104(4):452.
5. De Luca JF, Adams BB, Yosipovitch G. Skin manifestations of athletes competing in the summer olympics: what a sports medicine physician should know. *Sports Med*. 2012;42(5):399-413.
6. Rubegni P, Feci L, Fimiani M. Talon Noir: utility of dermoscopy for differential diagnosis with respect to other acral skin growths. *G Ital Dermatol Venereol*. 2012;147(1):133-4.
7. Ferreira CMM, Barcaui C, Piñeiro-Maceira J. Outras dermatoses de interesse dermatoscópico. In: *Atlas de Dermatoscopia. Aplicação clínica e correlação histopatológica*. Rio de Janeiro: DiLivros; 2011. p.189-98.
8. Bastos CAS. Non-traditional Indications in dermoscopy. *Surg Cosmet Dermatol*. 2012;4(2):203-5.
9. Rezze GG, Sá BCS, Neves RI. Dermatoscopia: o método de análise de padrões. *An Bras Dermatol*. 2006;81(3):261-8.
10. Periciamedicalegal.com.br [Internet]. Perícia Médica Legal. Importância forense do espectro equimótico [acesso 08 Abr 2013]. Disponível em: <http://periciamedicalegal.com.br/?p=6>.