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## Evaluation of Collision Tumors by Confocal Microscopy<sup>☆</sup>



### Tumores de colisión valorados por microscopía confocal

To the Editor:

Collision tumors are common in daily clinical practice, but diagnosis can be difficult. Dermoscopy and confocal microscopy are 2 noninvasive techniques that are very helpful in this type of lesion. We describe 2 cases in which the dermoscopic suspicion of a collision tumor was confirmed by confocal microscopy.

#### Case 1

A woman aged 51 years presented a macular lesion on her abdomen; she was uncertain how long the lesion had been present. Dermoscopy revealed a network pattern. In addition, there were several small round areas with comedo-like openings on dermoscopy (Fig. 1A).

Confocal microscopy showed a cobblestone pattern of the epidermis and a ring pattern at the dermoepidermal junction. Several areas with bright (hyperreflective) annular structures (with an onion skin appearance) and polycyclic cords were also visible (Fig. 1B). Histology revealed a collision tumor between a junctional melanocytic nevus and a seborrheic keratosis (Fig. 1C).

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#### Case 2

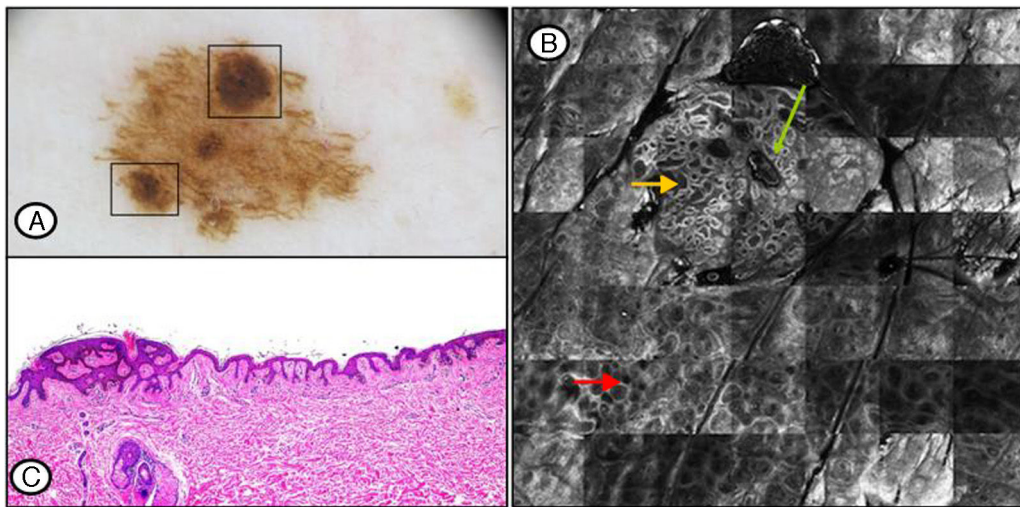
This patient was a 49-year-old man with a history of superficial spreading melanoma excised in 2011. Follow-up using digital dermoscopy revealed growth of a pigmented lesion on his back. The lesion was a pigmented macule measuring 0.6 cm in diameter. Dermoscopy revealed a homogeneous globular network pattern with asymmetric globules peripherally. An area of the lesion presented milia-like cysts and comedo-like openings (Fig. 2A).

A honeycomb pattern was observed in the epidermis and ring-like structures at the dermoepidermal junction, with occasional areas of crest fusion. In addition, a ring of bright (hyperreflective) structures (comedo-like openings on dermoscopy) and hyperreflective round intraepithelial structures with a smooth outline (milia-like cysts on dermoscopy) were observed (Fig. 2B).

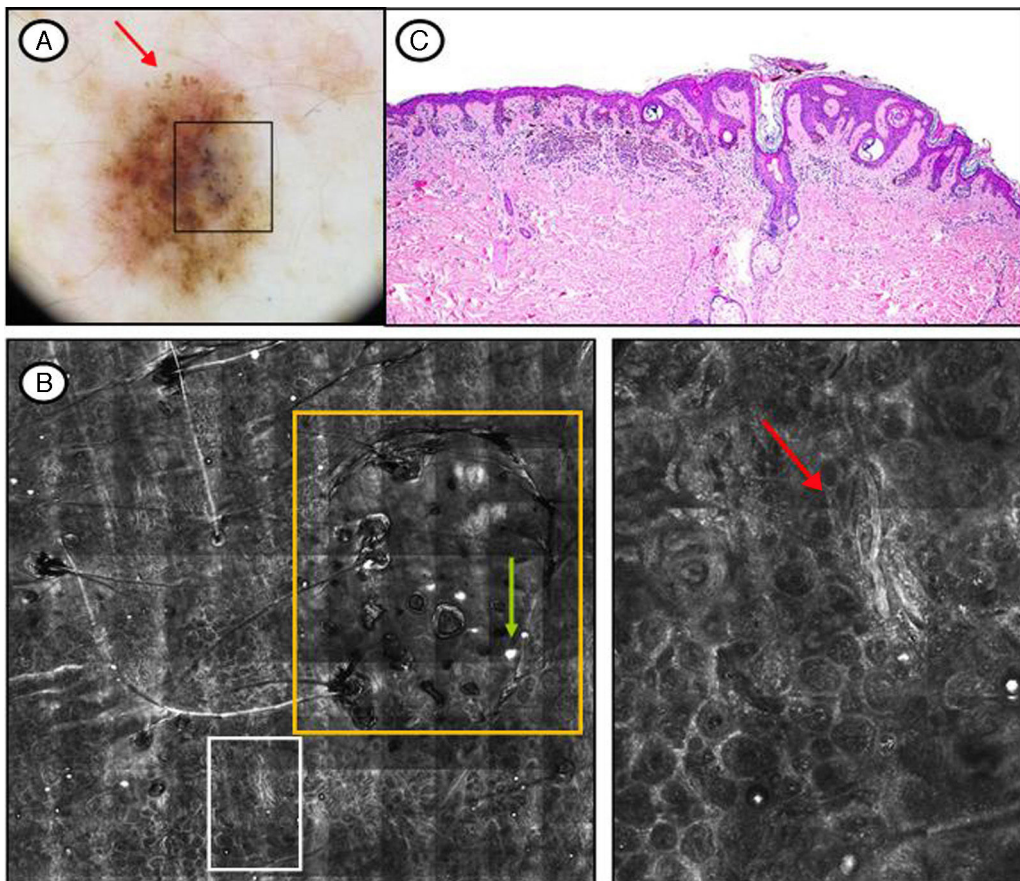
Histology revealed collision between a compound melanocytic nevus with distorted architecture but no atypia, and a seborrheic keratosis (Fig. 2C).

The term collision tumor is used to refer to the presence of 2 or more different tumors in a single lesion.<sup>1</sup> Clinical diagnosis can be difficult (particularly when the collision is between a malignant and a benign tumor), and dermoscopy and confocal microscopy are very useful diagnostic tools. When the collision is between 2 benign tumors, very good concordance is achieved between dermoscopy, confocal microscopy, and histology.<sup>2</sup> However, in the cases presented, although both lesions appeared benign on confocal microscopy, they were excised for histologic confirmation of the suspected diagnosis.

The association of seborrheic keratosis with melanocytic nevus is not uncommon. In a retrospective study published



**Figure 1** A Dermoscopy image. The black squares outline areas with comedo-like openings. B, Confocal microscopy image of  $3.5 \times 3.5$  mm. Ring pattern at the dermoepidermal junction (red arrow), polycyclic cords (yellow arrow), and bright annular structures with an onion-skin appearance (green arrow). C, A junctional melanocytic nevus in transition with a seborrheic keratosis, with its characteristic network pattern.



**Figure 2** A Dermoscopy image. Homogeneous globular network with asymmetric globules peripherally (red arrow). Milia-like cysts and comedo-like openings (in square). B, Confocal microscopy image of  $5.5 \times 5$  mm. The yellow square outlines the area with the bright annular structures and the hyperreflective round structures with a smooth outline (green arrow); on the right, at higher power, the ring pattern is visible at the dermoepidermal junction, with an area of crest fusion (arrow). C, The histologic image shows the presence in the same area of a compound melanocytic nevus and a seborrheic keratosis.

by Boyd and Rapini,<sup>1</sup> 40 000 skin biopsies were analyzed and 69 collision tumors were found, 14 of which involved a nevus and a seborrheic keratosis.

In case of doubt, confocal microscopy, a noninvasive imaging technique, helps to improve the evaluation of melanocytic lesions, as it permits in vivo evaluation of microscopic structures.<sup>3</sup> Moscarella et al.<sup>2</sup> described 24 cases of collision tumors and reported an excellent correlation between the histologic images and those obtained on confocal microscopy.

### Conflicts of Interest

The authors declare that they have no conflicts of interest.

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31 May 2015 7 December 2015

## Unusual Ultrasound Appearance of Subungual Keratoacanthoma With Clinical and Histological Correlation<sup>☆</sup>



### Presentación ecográfica no habitual de queratoacantoma subungueal con correlación clínica e histológica

To the Editor:

Keratoacanthomas (KA) form a group of tumors of epidermal origin but whose nature remains controversial. They are thought to be low-grade squamous cell carcinomas (SCC) that may become more aggressive in immunocompromised individuals. KAs are characterized by a rapid, exophytic growth, usually followed by spontaneous regression, and they typically occur in sun-exposed areas in elderly patients.<sup>1</sup>

The subungual or periungual variant of KA is rare; it is usually locally destructive and is less likely to undergo spontaneous involution. This variant is more common in white male patients and in the fifth decade of life. The cause is still unknown, but associations have been reported with trauma, carcinogen exposure, eczema, psoriasis, atopic dermatitis, xeroderma pigmentosum, and incontinentia pigmenti.<sup>2</sup>

### Case Description

We present the case of a 45-year-old woman with a history of incontinentia pigmenti. She consulted for a 1-month

history of a painful, rapidly growing swelling in the periungual region of the right thumb.

Physical examination revealed a skin-colored nodular lesion that occupied the ulnar and proximal borders of the nail of the first digit of the right hand (Fig. 1).

Color Doppler ultrasound was requested. The report described a solid, hypoechoic tumor with a center of lower echogenicity and of solid appearance, located at the ulnar border of the periungual region and extending into the nail bed on the same side; the ultrasound appearance was not suggestive of malignancy. The lesion measured 11 mm (transverse) × 10.7 mm (longitudinal) × 8.3 mm (depth). Vascularization was predominantly peripheral, in the form of narrow vessels with low-velocity arterial flow, and there was remodeling of the surface of the underlying distal phalanx. In addition, signs of inflammatory (hypervascularity) were



**Figure 1** Clinical photograph of the keratoacanthoma. The nodular, skin-colored lesion affected the proximal and ulnar borders of the nail and periungual region of the right thumb.

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