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The rainbow pattern in dermoscopy: A zoom on nonkaposi sarcoma skin diseases

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ABSTRACT

The rainbow pattern is currently a subject of debate, it is considered the specific dermoscopic pattern of Kaposi sarcoma. We present in this research correspondence a review of 700 dermoscopic figures of different biopsy-proven skin diseases in our department of dermatology of the Hospital Hassan II of Fez. All the lesions were localized to the limbs except for one lesion of atrophic scar that was localized on the left shoulder. RP was observed in four raised lesions: one case of hypertrophic scar, one case of angiokeratoma, one case of stasis dermatitis and one case of pseudo-Kaposi. These results indicate that the RP may be observed in non-kaposi sarcoma, with new observations of RP in pseudo-Kaposi and angiokeratoma.

The rainbow pattern (RP) or the structureless polychromatic zone (H.Kittler) is currently considered the specific dermoscopic pattern of Kaposi sarcoma [1]. However this fact has been brought into question by the great correspondence of Vazquez-Lopez et al. who presented four observations of melanoma, stasis dermatitis, lichen planus and haemosiderotic dermatofibroma [2]. This was criticized because there are only a few [3,4] publications supporting Vazquez's observations.

We present in this research correspondence a study aiming to investigate the significance of this RP pattern in conditions other than Kaposi sarcoma.

This was a review of 700 dermoscopic figures of different biopsy-proven skin diseases in our dermatology department of the Hospital Hassan II of Fez, from November 2012 to June 2017.

These dermoscopic images were documented with a digital camera (DermLite, Fotofinder), using polarized light with immersion in a few cases.

All the lesions were localized to the limbs except for one lesion of atrophic scar that was localized on the left shoulder. RP was observed in four raised lesions: one case of hypertrophic scar [Fig. 1A], one case of angiokeratoma [Fig. 1B], one case of stasis dermatitis [Fig. 1C] and one case of pseudo-Kaposi [Fig. 1D].

RP, as it was previously stated [2], is a game of absorption, diffraction and diffusion of the polarized light and its interference with different component of a disorganized dermis, it reflects not only the richness of the vascular network as it was mentioned in the article of S T. Cheng et al. [1], or the combination of the vascular and fibrous components, like we classically notice in vascular proliferations like kaposi lesions. An interesting paper by Satta et al. indicates that only papular- or nodular-type Kaposi sarcoma lesions show the rainbow pattern under polarized-light dermoscopy and that the pattern is completely absent in macular and bulla like lesions, this was also the case in

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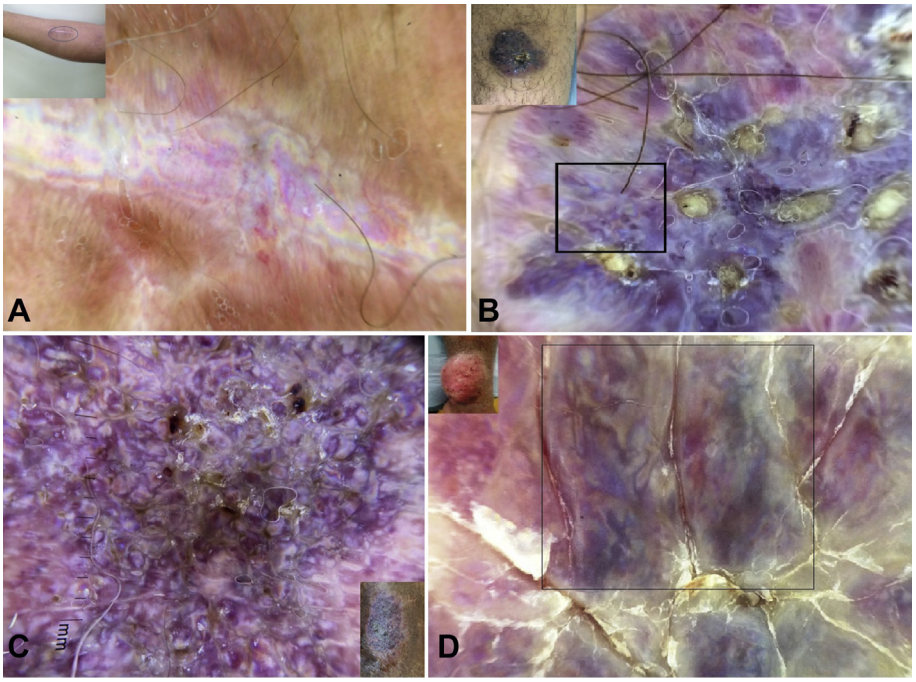

Fig. 1 Rainbow pattern in a scar (A) and an angiokeratoma (B). Rainbow pattern in stasis dermatitis (C) and pseudokaposi (D).

our study where all the non kaposi sarcoma lesions were raised lesions, and this RP in the study of Satta et al. was due to the presence of spindle like cells formed into bundles interweaving around irregularly shaped vascular spaces of varying sizes [5].

In summary, we may deduce that this RP is related to the difference of polarized light perception by different component of the dermis and spindle cells around the vessels.

Our findings confirm those of Vázquez-López et al., Perez et al. and Suppa et al., with new observations of RP in pseudo Kaposi and angiokeratoma.

Conflicts of interest

The authors have no conflicts of interest to declare regarding this manuscript.

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