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LETTERS TO THE EDITOR

Transverse-section Histology for Parallel-Ridge Pattern

Sección histological horizontal para el patron de la cresta

To the Editor:

In a recent issue of *Actas Dermo-Sifiliográficas* Blázquez et al raise the issue on the opportunity to analyse skin biopsies of acral pigmented lesions featuring a parallel-ridge pattern (PRP) after cutting them perpendicularly to the skin markings so that cristae profundae intermediae are included for sure in the tissue section.[1] The Authors conclude that "diagnosis of some suspect pigmented lesions is rendered impossible by the low cellularity of the sample. In such cases, the use of molecular biology techniques would be advisable to detect chromosomal abnormalities associated with acrolentiginous melanoma (...)".[1]

I wish to point out that transverse-section histology is a cheap and reliable tool to perform dermatoscopic-histologic correlations of acral pigmented lesions as plans of tissue sectioning are parallel to the skin surface and therefore to dermatoscopic visualization of lesions.[2,3] First, transverse-section histology allows a quick, low-magnification scan of the whole excised specimen. Then, higher magnification and analysis of deeper sections of key or "suspicious" dermatoscopic areas achieve and accurate and unambiguous localization of microanatomical structures. Namely, eccrine ducts are cut perpendicularly to their major axis and therefore appear as round or ovalar sections. Epidermal areas containing rows of epidermal ducts are the cristae profundae intermediae, which can be searched thoroughly for atypical/malignant cells and other features (for example melanin columns as a key of benignity) from the overlying corneum till the underlying dermoepidermal junction and dermis. The apparent issue of calculating tumor thickness can be overcome by summing the thickness of all sections overlying the deepest one at which malignant cells are still detected.

In view of these considerations, I propose the following diagnostic iter for acral pigmented lesions featuring a PRP: a) physical examination (possibly with the "furrow-ink test".[4]); b) dermatoscopy; c) wide excisional biopsy; d) split of the specimen into two halves obtained with a cut which is parallel to the skin markings; e) histological examination of half-lesion with sections cut perpendicularly to the skin markings. If no findings of melanoma are present, then f) the remaining half of the specimen should be analyzed after transverse sectioning.

It is worth reaffirming here, though, that the specificity of PRP as a marker of acral lentiginous melanoma is very high[5] and that only a handful of PRP-featuring, benign lesions (either pigmented or nonpigmented) have been reported.[5–8] Therefore every lesion showing a PRP should be managed as a melanoma unless top-qualified professionals decide otherwise.

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