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LETTER TO THE EDITOR

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Utility of dermatoscopy in the diagnosis of acanthosis nigricans

We have read with great interest the review article by Das et al, which was recently published in the Journal of Cosmetic Dermatology.[1] The authors provided a comprehensive and updated review of current knowledge on acanthosis nigricans (AN) with particular emphasis on diagnostic testing strategies. They pointed out that AN can imitate many different clinical entities, including epidermal nevus, psoriasis, fungal infections, atopic dirty neck, confluent and reticulated papillomatosis, Hailey-Hailey disease, and terra firma-forme dermatosis. The authors also underlined the importance of proper history, physical examination, and histopathological evaluation in the differential diagnosis.[1] Here, we would like to briefly discuss the role of dermatoscopy as an adjunctive diagnostic tool that will facilitate the diagnosis of AN.

A 16-year-old boy was referred to our dermatology department with two years history of symmetrically distributed dark, velvety plaques (Figure 1). The lesions were limited to both axillae. Polarized contact dermatoscopic examination (Dermlite DL4, 3Gen Inc) showed multiple linear cristae and sulci (Figure 2), widespread distributed numerous white to brown exophytic papillomatous structures, and multiple asymmetric black blotches (Figure 2). His body mass index was 27 kg/m^2 and laboratory investigation showed elevated levels of HOMA-IR (Homeostasis model assessment-insulin resistance). Histopathological examination revealed epidermal papillomatosis, hyperkeratosis, hyperpigmentation of the basal layer, and upward finger-like projection of dermal papillae (Figure 3). A diagnosis of acanthosis nigricans was made based on the clinical, dermatoscopic, and histopathological correlation. The patient was referred to the pediatric endocrinology department for further evaluation.

Recently, dermatoscopy has become an indispensable diagnostic tool in dermatology practice. Dermatoscopic features of many neoplastic and non-neoplastic cutaneous conditions have been well described. However, only a few studies have aimed to identify the dermatoscopic features of AN. The reported dermatoscopic features for mild to moderate AN include diffuse dark brown background, cerebriform appearance, multiple cristae, sulci, milia-like cysts hyperpigmented dots, and streaks.[2-6] The pattern of multiple cristae and sulci is especially more visible in dark-skinned patients due to the contrast with unaffected dark skin.[2,7]

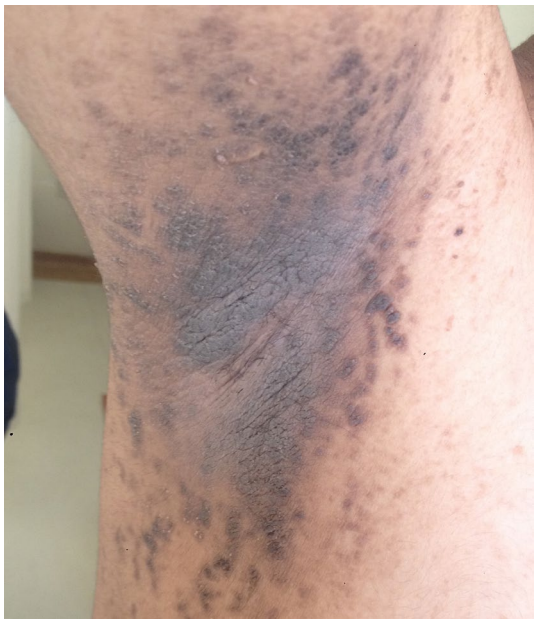

FIGURE 1 Dark, velvety papules and plaques distributed over the axillary region

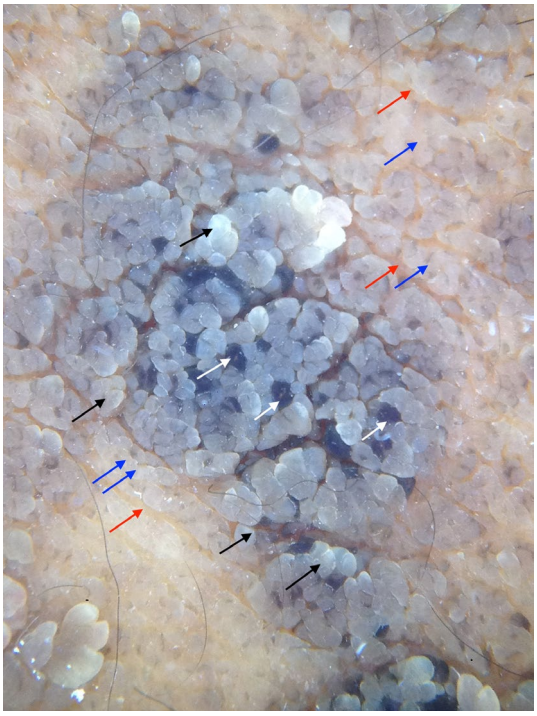

FIGURE 2 Dermatoscopic examination showed multiple cristae (blue arrows) and sulci (red arrows), multiple white to brown exophytic papillary structures (black arrows) and black blotches (white arrows)

[Corrections added on November 12, 2020, after first online publication: Ömer Faruk Elmas' and Abdullah Demirbaş' names have been corrected.]

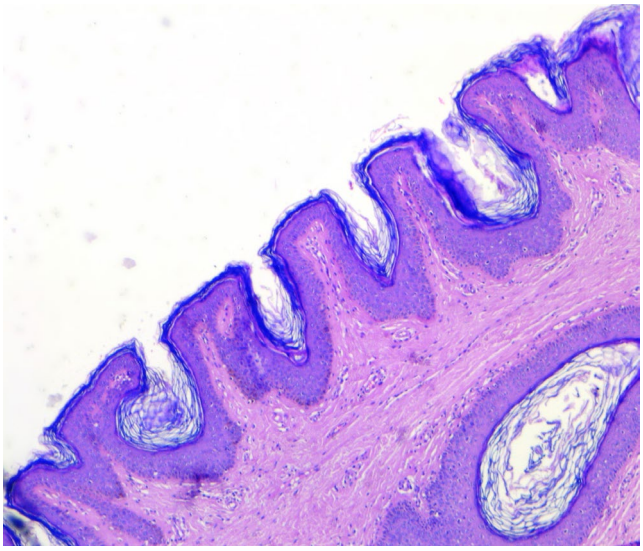

FIGURE 3 Histopathological examination showed epidermal papillomatosis, hyperkeratosis, hyperpigmentation of the basal layer, and upward finger-like projection of dermal papillae (H&E, ×100) [Color figure can be viewed at wileyonlinelibrary.com]

In our case, the most striking dermatoscopic finding was multiple exophytic papillary structures corresponding to severe epidermal acanthosis and papillomatosis. Follicular keratotic plugs were dermatoscopically represented by black blotches. In the present case, the main differential diagnosis was VEN that may also exhibit exophytic papillary structures similar to those observed in AN. However, VEN additionally shows large brown circles, branched brown lines, and brown globules which are absent in AN.[8] In the present case, the other differential diagnoses included terra firma-forme dermatosis, dermatosis neglecta, and lichen planus. Terra firma-forme dermatosis dermatoscopically shows polygonal brown clods arranged in a mosaic pattern while dermatosis neglecta exhibits irregularly distributed cornflake-like dark brown scales.[9,10] Lichen planus is represented by network-like intersecting white structures on dermatoscopy.[11]

To conclude, the diagnosis of AN is not always straightforward on the clinical basis due to morphological overlaps. In this context, dermatoscopic examination may serve as a noninvasive helpful tool in the differential diagnosis. It is obvious that studies with large sample sizes should be performed to clearly demonstrate the value of dermatoscopic examination in the diagnosis of AN.

CONFLICT OF INTEREST

None.

INFORMED CONSENT

The patient in this manuscript has given written informed consent to the publication of his case details.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

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