Dermoscopy of perforating lichen nitidus: a case report

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To the Editor: Perforating dermatoses is a group of diseases characterized by papulonodular rashes with the elimination of endogenous or exogenous materials through the epidermis. The primary perforating disorders include reactive perforating collagenosis, elastosis perforans serpiginosa, Kyrle disease, perforating folliculitis, and acquired perforating dermatosis. The perforating phenomenon could also be secondary to some other skin disorders, such as calcinosis cutis, granuloma annulare, chromoblastomycosis, lichen planus, lichen striatus, and rarely, lichen nitidus. Herein, we report a case of extensive perforating lichen nitidus in a Chinese patient.

A 10-year-old boy presented with increasing asymptomatic lesions on his trunk and upper limbs for 2 years. He had no other significant medical or family history. Clinical examination revealed numerous, discrete, flesh-colored, shiny papules measuring about 2 mm in diameter distributed over upper extremities, trunk, lower jaw, and nape, some of which were umbilicated [Figure 1A]. The oral mucosa, genital, and nails were not involved; Koebner phenomenon was not present. Dermoscopy of the lesions on the arm revealed three concentric areas characterized by whitish-brownish area with keratin plug in the center, a structureless whitish annular cloud-like area, and a peripheral halo with delicate brown pigmentation [Figure 1B]. Histopathological examination of an umbilicated papule showed well-circumscribed lymphohistiocytic infiltration immediately beneath an atrophic epidermis, bordered by adjacent rete ridges that appeared to clout the infiltrate in a “ball-in-claw” configuration. Degenerated keratinaceous material with lymphohistiocytic cells extended into the stratum corneum through a broad perforating channel [Figure 1C and 1D]. The final diagnosis was perforating lichen nitidus. He was prescribed topical corticosteroid for 2 weeks; his lesions slightly improved, but relapsed after discontinuation.

Perforating lichen nitidus was first delineated by Bardach in 1981.[4] To date, only eleven cases, including the present case, have been reported worldwide. All cases reported involved children to young adults, and most were males similar to our patient. In the literature, typical clinical lesions on extremities were reported in eight out of ten patients, especially dorsal hands, fingers, and feet.[2] Extensive involvement of the trunk as in the present case is extremely rare. Zhang et al.[3] have described a palmar-perforated type of lichen nitidus in a 15-year-old Chinese boy. The present case is the second case of perforating lichen nitidus in Chinese population and the sixth case reported in Asian population. The Mongoloid race accounts for half of the reported cases, implying that ethnicity might be one of the risk factors for this condition.

The differential diagnosis of perforating lichen nitidus includes other primary and secondary perforating dermatoses [Supplementary Table 1, http://links.lww.com/CM9/A278]. These dermatoses share the similar characteristic pathological process, transepidermal elimination of endogenous or exogenous materials; however, the “eliminated” materials differ. The exact pathogenesis for perforating dermatoses is still obscure. A theory suggested include binding of altered dermal constituents or foreign bodies to some unidentified receptor, leading to the formation of transepidermal perforating channels with subsequent extrusion of abnormal dermal constituents through the epidermis.[4]

Clinically, molluscum contagiosum, generalized eruptive syringoma, lichen planus, verruca planae, lichen pilaris, verruciformis epidermodysplasia, steatocystoma multiplex, and follicular eczema are all included in the differential diagnosis of perforating lichen nitidus.

Dermoscopy is a non-invasive technique that might be useful to facilitate the diagnosis of perforating lichen nitidus from other diseases.[5] The dermoscopic feature has been reported recently, which was characterized by two-concentric areas that have a central light-brown keratin...
plug and a peripheral, whitish annular cloud-like area.[6] We found two similar concentric zones in the present case; however, an outermost located halo with delicate brown pigmentation was also noted. The discrepancy in the dermoscopic findings might be explained by the different location of the lesions.

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient’s guardians have given their consent for their images and other clinical information to be reported in the article. The patient’s guardians understand that their names and initials will not be published and due efforts will be made to conceal the identity of the patient, although anonymity cannot be guaranteed.

Conflicts of interest

None.

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