Acquired reactive perforating collagenosis

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To the Editor: A 50-year-old man presented with a 1-month history of pruritic papules and nodules on his trunk and extremities. The patient had a 20-year history of alcoholism, and a 10-year history of Meniere's disease. He was treated with intravenous sodium aescinate for 5 days because of Meniere's disease 2 months ago. Other chronic diseases or special family histories were denied. Upon physical examination, red or brown papules, and nodules with diameter of 3 to 5 mm were noted on his limbs, shoulders, and dorsum, with central umbilicated necrosis, or keratin plug, accompanied by Kobner Phenomenon [Figure 1A]. Ultrasonic examination, peripheral blood cell count and biochemical examination were basically normal. Dermoscopic examination revealed a red-brown structureless area covered with crusts and scales centrally, surrounded by a white rim, and a reddish inflammatory circle with looped and dotted vessels peripherally in polarization mode [Figure 1B]. Histopathology showed neutrophils and degenerated keratin components in central goblet necrotic epidermis, degenerated collagen fibers beneath the necrotic epidermis, and sheet of lymphocytes and scattered eosinophils around blood vessels in the dermis [Figure 1C]. Masson staining [Figure 1D] and Verhoeff-van Gieson staining [Figure 1E] confirmed the penetration of collagen fibers and fragmented elastic fibers in the necrotic epidermis. Acquired reactive perforating collagenosis was diagnosed, which reacted well to 5-week treatment of oral antihistamines, topical steroids, and narrow-band ultraviolet B. The patient reported clearance of the lesions for 4 months, but recurrence after alcohol intake again in telephone follow-up.

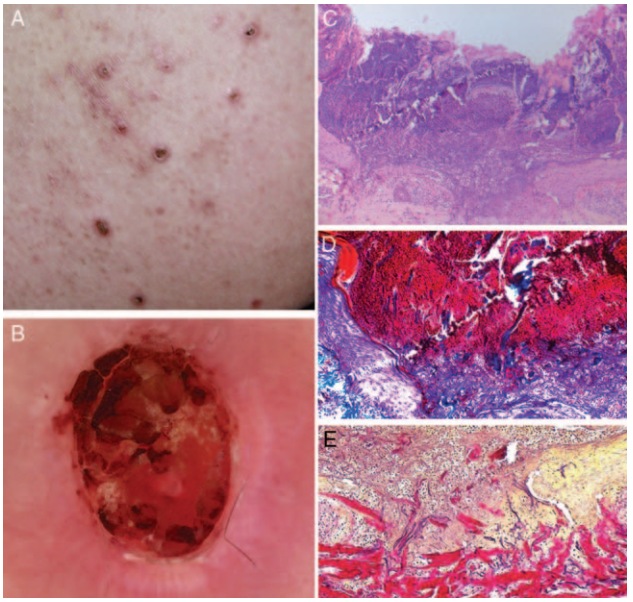

Figure 1: The clinical manifestation, dermoscopic and pathologic findings of the patient. (A) Red or brown papules and nodules with central umbilicated necrosis, or keratin plug on left buttock. (B) Dermoscopic findings showing a red-brown structureless area covered with crusts and scales centrally, surrounded by a white rim, and a reddish inflammatory circle with looped and dotted vessels peripherally in polarization mode (BN-YQTC-1001, original magnification, ×50). (C) Histopathology showing neutrophils and degenerated keratin components in central goblet necrotic epidermis, degenerated collagen fibers beneath the necrotic epidermis, and sheet of lymphocytes and scattered eosinophils around blood vessels in the dermis (hematoxylin-eosin staining, original magnification, ×100). Masson staining (D) and Verhoeff-van Gieson staining (E) confirmed the penetration of collagen fibers and fragmented elastic fibers in the necrotic epidermis (original magnification, ×200).

Acquired reactive perforating collagenosis (ARPC) usually presents with hyperkeratotic, umbilicated, millimetric, or larger papules or nodules, with excoriations and crusts; diagnosis is sometimes missed or delayed.[1-3]

Histopathology and histochemical staining are necessary for diagnosis. Karpouzis *et al*[3] suggested that the typical pathologic feature was a dome-shaped lesion with a central crater and epidermal ulceration, consisting of keratin, polymorphonuclear cell debris, and fibers (mainly collagen fibers revealed by histochemical staining) which were extruded from the bottom of the crater. In our case, both collagen fibers and fragmented elastic fibers were confirmed in the necrotic region.

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Ormerod *et al*[4] found the common dermoscopic manifestations of ARPC included three features, consistent with our findings. Firstly, the center of the lesion was a yellow-brown structureless area in keeping with surface crust. Secondly, it was surrounded with a white rim of varying thickness. Thirdly, there was an outer pink inflammatory circle with commonly short looped vessels centrally and dotted vessels peripherally. Coexistence of all these three features facilitates the early diagnosis.

Management of ARPC aims to control systemic disease and alleviate pruritus, but there is currently no consensus on treatment. Some therapeutics was reported to be effective, including emollients, anti-histamines, keratolytics, doxycycline, retinoids, steroids, allopurinol, ultraviolet B phototherapy, and transcutaneous electrical nerve stimulation.[3,5]

In summary, we report a case that illustrates the clinical features, dermoscopic changes, pathologic and histochemical features of ARPC. The dermoscopy might be a useful and quick method to facilitate diagnosis.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the article. The patient understands that his name 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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