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CORRESPONDENCE

Subungual clear cell acanthoma

Dear Editor,

A 70-year-old man presented with a painless papule on the nail bed of his right third finger, which had been present for 2 years. The patient did not have a history of nail trauma, nor did he have psoriasis or other inflammatory dermatosis. On physical examination there was a 4 × 4 mm erythematous to yellowish subungual keratotic papule with longitudinal splitting of the nail plate and ulceration on the nail bed of the right third finger (Figure 1A). The lesion was tender and firm in texture. Dermoscopy showed keratotic papules with a few dotted vessels at the peripheral area. We partially removed the nail plate to create a wedge-shaped window (Figure 1B) and then excised the tumor.

Histopathology showed parakeratosis, marked acanthotic lobules of clear epidermal cells with neutrophilic and lymphocytic exocytosis, and heavy infiltrates of lymphocytes and plasma cells in the dermis (Figure 2A and B). Abundant diastase liable glycogen was shown in the epidermal squamous cells by periodic acid–Schiff staining, and a clear cell acanthoma (CCA) was confirmed (Figure 3A and B). As the histopathology showed no deep margin involvement, the patient did not receive further radiological examination. There was no recurrence in the following 6 months. The nail plate grew gradually with normal appearance.

CCA is a benign tumor of epithelial origin and was first described by Degos et al in 1962.[1] CCA is a benign epidermal dermatosis which usually presents as a solitary lesion ranging in size from 5 mm to 20 mm; however, multiple and disseminated forms of CCA have also been reported. Wafer-like scales often surround the lesion in a collarette. CCA often occurs in middle-aged people without sex predominance. The largest evaluation of CCA showed that the leg is the most common location (51%), followed by the trunk and arms.[2] Other rare locations include the umbilicus, hallus, and vermilion. However, subungual CCA has not yet been reported. In addition to CCA, a variety of malignant or benign lesions affect the subungual region, including squamous cell carcinoma, acral lentiginous melanoma, glomus tumors, onychomatricoma, neurofibroma, subungual exostosis, subungual wart, subungual keratoacanthoma, and pincer nail deformity.[3] The diagnosis should be made by histopathological findings.

Histopathologically, CCA is composed of well-demarcated acanthotic epidermis. The clear cells have abundant glycogen, which can be shown by positive periodic acid–Schiff staining. Neutrophilic exocytosis and dilated vessels in the upper dermis are also features. The pathogenesis of CCA is still to be ascertained. Some workers have suggested that CCA is a benign neoplasm.[4] However, recent reports have shown that CCA develops on areas of pre-existing inflammatory dermatosis, such as stasis dermatitis, bacterial infection, psoriatic plaques, trauma, nipple eczema, and split-thickness skin graft. In one review of

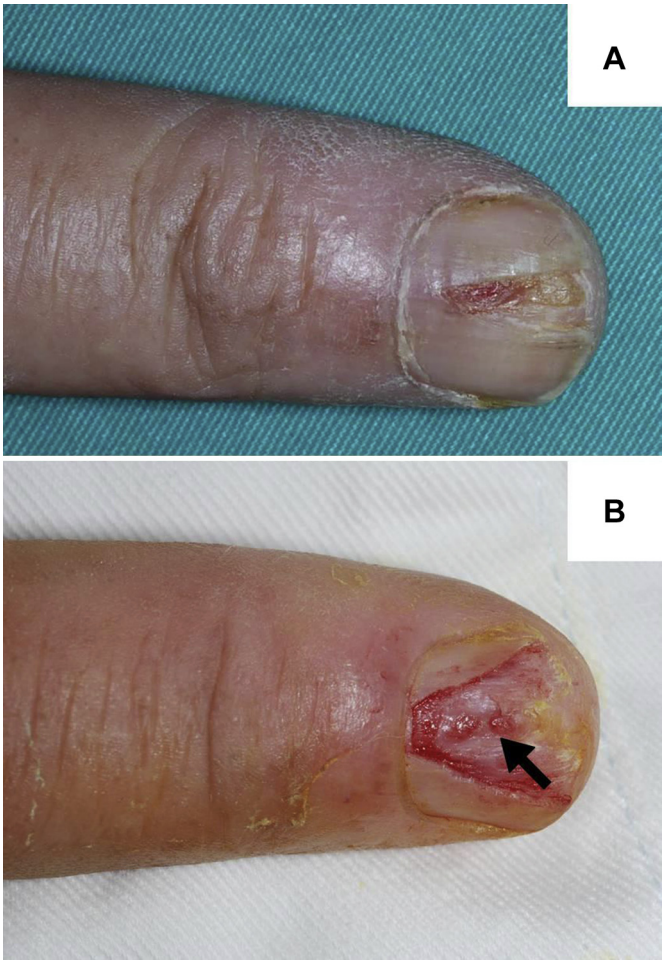

Figure 1 (A) Flesh-colored subungual papule with longitudinal splitting of the nail plate and ulceration under the right third fingernail. (B) The nail plate was partially removed and one wedge-shaped window was created. The papular lesion is marked by an arrow.

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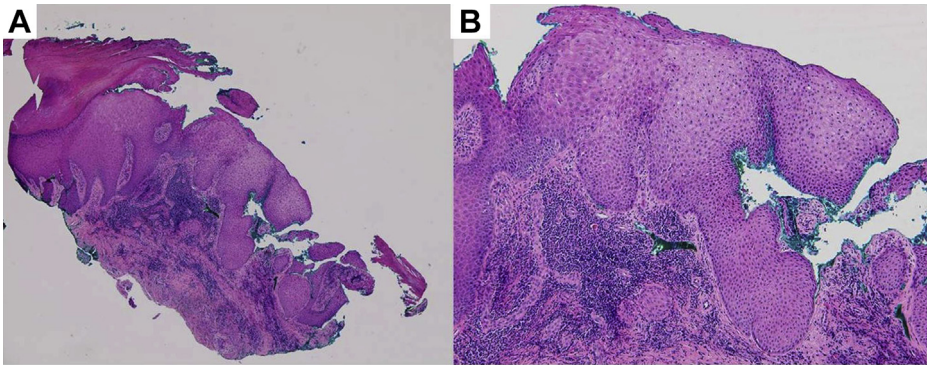

Figure 2 (A) Marked parakeratosis and acanthotic lobules of clear epidermal cells. Hematoxylin and eosin (H&E) stain, original magnification ×40. (B) Under higher magnification, the specimens showed neutrophilic exocytosis and heavy infiltrates of lymphocytes and plasma cells in the dermis. H&E stain, original magnification ×100.

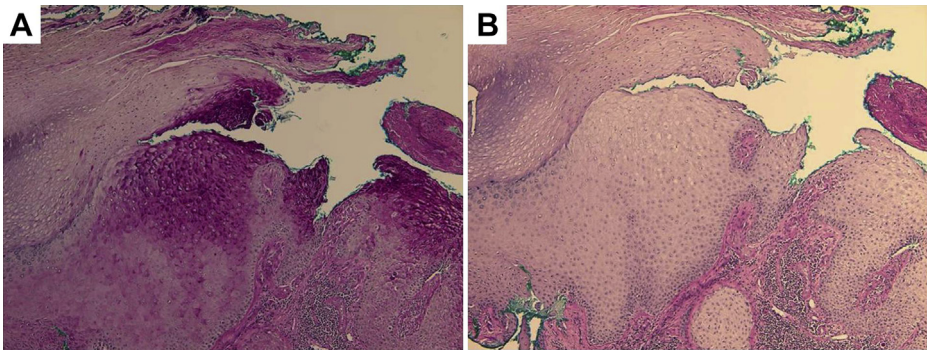

Figure 3 (A) Clear epidermal cells containing abundant glycogen as shown by periodic acid–Schiff staining (original magnification ×100). (B) Cells after removal of diastase liable lycogen by diastase digestion. Periodic acid–Schiff staining and diastase (original magnification ×100).

CCA, clinical and histopathological findings of chronic inflammation were found in 10 of 14 patients.[5] Recent studies have therefore speculated that CCA is a reactive dermatosis. In the case reported here, heavy infiltrates of lymphocytes and plasma cells in the dermis indicated a previous inflammatory process. The histopathological findings support the hypothesis that CCA is a reactive dermatosis.

The dermatoscopic features of CCA are pinpoint vessels in a pearl-like linear arrangement. These capillaries are thought to correspond to dilated capillaries in elongated dermal papillae. In the case reported here, dermoscopy showed keratotic papules with only a few dotted vessels at the peripheral area. These findings may be related to the marked parakeratosis seen under a microscope.

The therapeutic options for CCA include surgical excision, curettage, electrofulguration, cryotherapy, and treatment with topical 5-fluorouracil. In the patient reported here, we removed the tumor by surgical excision. As the nail plate was only partially removed, the recovery period was shortened.

In summary, this is the first reported case of subungual CCA. Doctors should consider CCA as a differential diagnosis of subungual tumors. The histopathological findings suggest that the lesion may have been a reactive dermatosis secondary to a previous inflammatory process; however, further evidence is required to confirm this.

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