Dermatology Practical & Conceptual

Inverted Follicular Keratosis of the Nail Unit: A Rare Case Report

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Case Presentation

A sixty-two-year-old female presented with a painless periungual lesion on the left thumb, which had evolved over three months. Clinical examination revealed a nodular pink lesion located beneath the proximal fold of the nail of the left thumb, with a verrucous surface at its distal part. The lesion was painless on palpation and did not bleed upon touch (Figure 1A). An excisional biopsy of the lesion was performed. Histopathological examination showed epithelial proliferation with a predominantly verrucous exophytic and endophytic growth pattern. The epidermis was thickened, exhibiting ortho- and parakeratotic hyperkeratosis. It was mature, without significant cytonuclear atypia, and contained rare dyskeratotic bodies. Notably, no koilocyte was observed. The endophytic component invaginated into the dermis as large lobules or small lobules of coiled cells without atypia, with some keratin pearls. The limited visible dermis beneath the endophytic component showed a lymphocytic inflammatory reaction and neovascularization, consistent with an inverted follicular keratosis (Figures B and C). Postoperative outcomes following excision were uncomplicated, and no recurrence was observed after one-year follow-up.

Teaching Point

Inverted follicular keratosis (IFK) is a rare benign lesion that typically manifests as a small, solitary, papillomatous papulo-nodule, most commonly in elderly individuals. The exact etiopathogenesis of IFK remains unclear.

In 90% of cases, IFK is localized in the head and neck region. Other locations have rarely been documented in the literature, and to our knowledge, the localization in the nail unit has never been reported in the literature.

Clinically and dermoscopically, IFK lacks specific distinguishing features, making it challenging to differentiate it from other keratinizing lesions such as viral warts, seborrheic keratoses, keratoacanthoma, fibrokeratoma, squamous cell carcinoma, basal cell carcinoma, and melanoma [1]. Thus, the diagnosis of IFK is primarily established through histopathological examination.

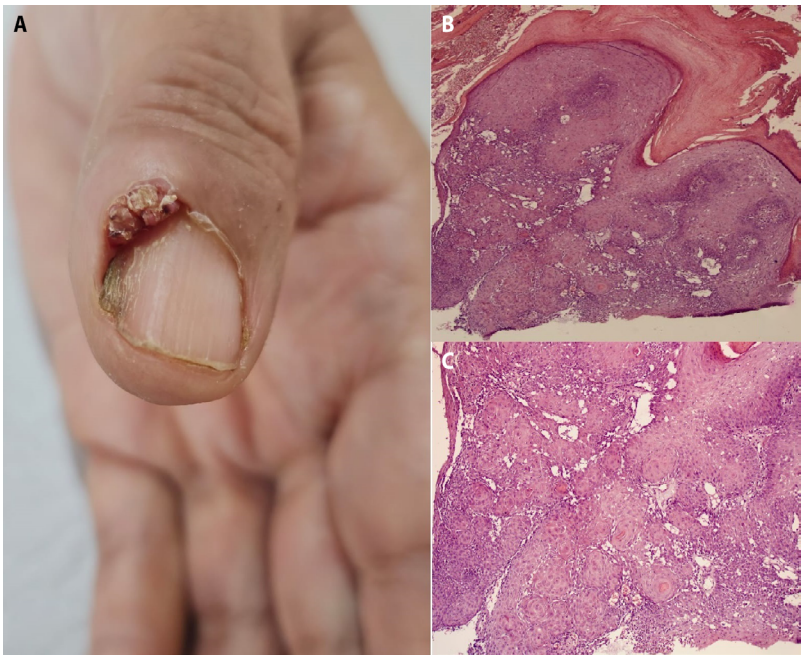

Figure 1. A nodular lesion in the proximal fold of the nail of the left thumb, with a verrucous surface at its distal part. B: Histological image (4x): epidermal proliferation with both exophytic and endophytic components covered by orthokeratotic and parakeratotic hyperkeratosis. C: Histological image (10x): endophytic component with whorls and dyskeratosis.

Histologically, IKF can also pose a differential diagnostic challenge with trichilemmoma, squamous cell carcinoma, keratoacanthoma, verruca vulgaris, and especially seborrheic keratosis, particularly when it is irritated. In this specific case, the characteristic endophytic growth pattern of IKF allowed for distinguishing between these two entities [2].

Surgical excision is the treatment of choice for IFK, although topical application of imiquimod 5% cream has also been reported to be effective.

References

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