

## A Case of Isolated Epidermolytic Acanthoma

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Epidermolytic acanthoma is a rare benign tumor, which may occur in both isolated and disseminated forms. Clinically, this asymptomatic lesion resembles a verruca or molluscum. Histopathologically, it is characterized by epidermolytic hyperkeratosis, also referred to as granular degeneration. We, herein, report a case of isolated epidermolytic acanthoma on the scrotum in a 36-year-old man for its rarity in Korean dermatologic literature. (*Ann Dermatol* 16(2) 61~63, 2004)

*Key Words:* Epidermolytic acanthoma, Isolated

### CASE REPORT

A 36-year-old man presented with several, asymptomatic papular lesions localized on the scrotum, which had lasted for a few months. He had no significant medical disease, and he had not taken any medicine. A skin examination revealed the presence of five 3 - 5 mm sized, round, flesh-colored papules on the scrotum (Fig. 1). The skin biopsy showed marked hyperkeratosis, acanthosis, and hypergranulosis with irregularly thickened basophilic keratohyaline granules (Fig. 2A). The cells of the upper stratum malpighii contained numerous large, clear, perinuclear spaces with dense masses of keratohyaline granules and condensation of the cytoplasm (Fig. 2B). The indistinct boundaries of these cells were observed. There was slight perivascular lymphocytic infiltrate. On the basis of the clinicopathological finding, we diagnosed isolated epidermolytic acanthoma. The lesion has not recurred for 10 months after abalative CO<sub>2</sub> laser treatment.

### DISCUSSION

Epidermolytic acanthoma was first described by Shapiro and Barat in 1970<sup>1</sup>. Six of their cases consisted of solitary tumors that had clinical features resembling warts, but the histologic finding indicated epidermolytic hyperkeratosis. As it may have the appearance of verruca, molluscum or soft fibroma, and as in such lesions, microscopic examination is seldom performed. Therefore, the frequency of epidermolytic acanthoma may have been underestimated. It can be found on almost any body site and usually appear in middle age. Diagnosis is based mainly upon microscopic examination. The essential histopathological finding of it, epidermolytic hyperkeratosis, is a histologic reaction pattern characterized by random-sized clear spaces around nuclei in the stratum spinosum and granulosum, reticulate, lightly-staining material forming indistinct cellular boundaries, a markedly thickened granular zone containing an increased number of small and large, irregularly shaped basophilic keratinohyaline-like bodies, and compact hyperkeratosis<sup>2</sup>. The histologic features of epidermolytic hyperkeratosis have been observed, not only in congenital dermatoses, but also in acquired dermatoses. The former include bullous congenital ichthyosiform erythroderma, systemized epidermal nevus, and hereditary palmoplantar keratosis<sup>3</sup>. The latter include isolated epidermolytic acanthoma (IEA), and disseminated epidermolytic acanthoma (DEA). Epidermolytic hyperkeratosis has

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Fig. 1. Close-up view: Two, 3 - 5mm sized, folliculo-centric, round, flesh-colored papules on the scrotum.

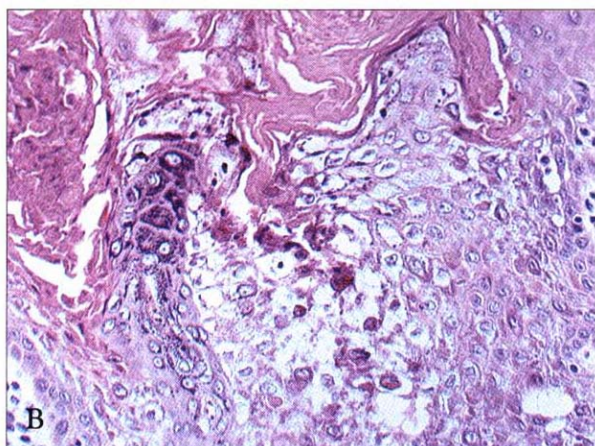
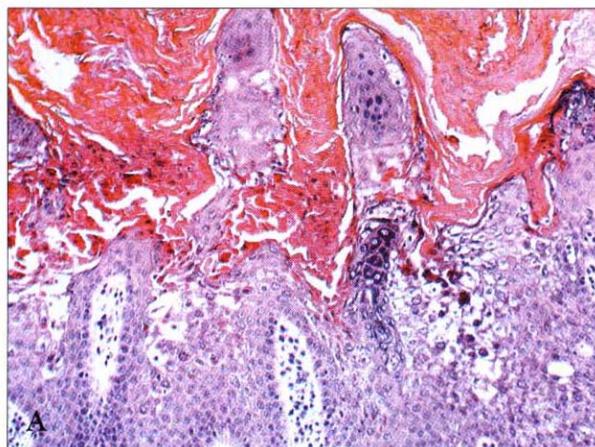


Fig. 2. A. Marked hyperkeratosis, papillomatosis, acanthosis in the epidermis. Note the vacuolar degeneration in the stratum malpighii (H&E,  $\times 40$ ). B. The vacuolated cells with clear perinuclear spaces, clumped basophilic keratohyaline granules in the epidermis (H&E,  $\times 200$ ).

also been reported as an incidental finding in various acquired solitary skin lesions, or in their vicinity, such as; sebaceous cyst, seborrheic keratosis, cutaneous horn, squamous cell carcinoma, lichenoid amyloidosis, granuloma annulare, leukoplakia, senile sebaceous hyperplasia, basal cell epithelioma, and solar keratosis<sup>3,4</sup>.

The mechanisms involved in the development of the lesions are not fully understood. Tomoda et al.<sup>5</sup> suggested that IEA might be caused by viruses, based on their observation of virus-like particles in IEA and its clinicopathological resemblance to viral warts. But the detection of HPV-DNA in the lesional skin by in situ hybridization was failed<sup>6</sup>. Chun et al.<sup>3</sup> reported a case of disseminated epidermolytic acanthoma associated with disseminated superficial actinic porokeratosis in an immunosuppressed patient and suggested that decreased immune surveillance has a role in the pathogenesis of disseminated epidermolytic acanthoma. Although, any alteration in K1 or K10 is responsible for hereditary basis in some disorders involving epidermolytic hyperkeratosis, it is still unclear that some postzygotic/mosaic abnormality of K1 or K10 may play a role in the pathogenesis of the acquired disease entity involving epidermolytic hyperkeratosis, such as epidermolytic acanthoma<sup>7</sup>.

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