One Brownish Hyperkeratotic Plaque on Right Posterior Ankle in a 51-year-old Female

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CASE REPORT

A previously healthy 51-year-old female presented with an asymptomatic skin lesion on her right posterior ankle for 10 years. She denied any trauma history or the occurrence of previous cystic lesions. On examination, there was a brownish hyperkeratotic plaque about 1.2 cm in size on her right posterior ankle (Fig. 1). Excisional biopsy was performed and the specimen was sent for pathological examination (Fig. 2). PCR for detecting human papilloma virus genome was also performed.

Fig. 1

Fig. 2 H&E, 40X
DIAGNOSIS: *Trichilemmal Keratosis*

HISTOPATHOLOGY

The specimen showed compact hyperkeratosis and mild parakeratosis, and the epithelium showed papillomatosis. The epithelium was composed of pale-staining keratinocytes without obvious intercellular bridges. Abrupt keratinization without granular cell layer formation mimicking out root sheath keratinization (trichilemmal keratinization) was noted. Invasion was not seen.

DISCUSSION

Trichilemmal keratosis (TK) was first described by Headington\(^1\) as a rare keratinizing tumor that resembles hyperkeratotic lesions such as cutaneous horn, seborrheic keratosis or hyperkeratotic actinic keratosis.\(^2\) It is characterized histopathologically by prominent orthokeratotic hyperkeratosis and verrucous hyperplasia of the epidermis without the formation of a granular cell layer.\(^2\) This kind of keratinization, the so-called trichilemmal keratinization, is similar to that found in the follicular isthmus or in trichilemmal cysts. Its pathogenesis is still unclear. Headington assumed that this lesion might derive from the hair follicle or represent a phenotypic change of epidermal and infundibular keratinocytes.\(^1\) A viral origin has been proposed by Kimura, who found intranuclear electron dense particles morphologically resembling human papilloma virus by electron microscopy in the upper part of the epithelium.\(^3\) Nevertheless, we failed to demonstrate HPV genome in our case by means of PCR. A possible relation of TK with trichilemmal cyst and proliferating trichilemmal cyst was postulated by some authors,\(^2,3\) however, a relationship with trichilemmal cyst was not seen in our patient. The reported locations of TK were usually on head (scalp) and neck,\(^2,3\) thus, it is so interesting that the TK developed at the posterior ankle of our patient, which is not a follicular prominent area. It was also noted that there was no any follicular unit microscopically in our patient, therefore we assumed that TK might represent a phenotypic change in the epidermal and infundibular keratinocytes rather than be a tumor of the hair follicle.

REFERENCES