A Case of Trichilemmal Horn

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Trichilemmal horn (trichilemmal keratosis) is a rare keratinizing tumor that resembles a cutaneous horn. Histologically, it is characterized by an abrupt maturation of keratinocytes into lamellar keratin without the formation of a granular layer. We describe a case of a trichilemmal horn on the right cheek of a 78-year-old woman. (Ann Dermatol 13(2) 110–112, 2001).

Key Words : Trichilemmal horn

TH (Trichilemmal horn) is a unique, uncommon epidermal tumor that exhibits a hard protruding hyperkeratotic mass. The clinical features of TH share those of a cutaneous horn. But histopathologically, TH is characterized by the trichilemmal keratinization, an abrupt maturation of keratinocytes into lamellar keratin without the formation of a granular layer

We describe a case of a trichilemmal horn, which shows typical clinical and histopathological features.

CASE REPORT

A 78-year-old woman had a keratotic horn protruding from an erythematous area on her right side of cheek. The tumor had been present for 10 months. The tumor measured 1.2 cm in diameter, and was 0.6 cm in height in the center of the horn. The lesion had an indurated and erythematous border (Fig. 1). The lesion was removed under local anesthesia. A biopsy specimen showed a U-shaped verrucous epidermal proliferation with prominent orthokeratotic hyperkeratosis, and focal areas of parakeratosis. The epidermis beneath the horny layer was composed of large pale-staining cells. There was orderly maturation of the keratinocytes from the lower to the upper layers of the epidermis, with an abrupt transformation of the keratinocytes into lamellar keratin without the formation of a granular layer (Fig. 2A, B). There was no secondary germinal bud extending from the epithelial lobule, no keratinocyte atypia and the dermis contained mild inflammatory infiltrates.

DISCUSSION

Trichilemmal horn (TH) was first described by Headington in 1976 as "a rare keratinizing tumor which resembles a cutaneous horn or a hyperkeratotic actinic keratosis"1.

Clinically, TH usually occurs on the sun-exposed areas including scalp, face, upper extremities of adult or elder patients2. Hence ultraviolet radiation may have either a direct or an indirect role in the pathogenesis of TH in some patients3.

The two main histologic features that characterize TH are the trichilemmal keratinization and the epithelial hyperplasia. Trichilemmal keratinization is the production of orthokeratotic hyperkeratosis by keratinocytes without the formation of a granular cell layer, in the same way that normal follicular isthmus or trichilemmal cysts keratinize. The cutaneous horn, which is the main clinical characteristic of TH, is a

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consequence of this compact type of keratinization. The second histologic characteristic of TH is the verrucous epidermal hyperplasia with intradermal epithelial growth that occurs in the form of round lobules composed of large pale-staining keratinocytes. Though DiMaio et al suggested that typically dermal inflammation is absent in TH, some reports including our case showed variable dermal inflammatory infiltrates.

Actinic keratosis, verruca vulgaris, seborrheic keratosis, and keratoacanthoma can also display some degree of trichilemmal keratinization. At low magnification, the architectural pattern of her lesion had some features that were similar to a hypertrophic actinic keratosis, or a seborrheic keratosis. However, examination at higher magnification enabled us to exclude these diagnoses.

It is not clear whether TH derives from the hair follicle or whether it represents a phenotypic change of epidermal and infundibular keratinocytes. However, the microscopic resemblance with the trichilemmal keratinization and the immunohistochemical positive staining for CD34, a specific marker for the outer root sheath of the hair follicle suggest an outer root sheath origin.

The term, cutaneous horn, has been used to describe a protruding hyperkeratosis or hyperkeratotic papilloma that may be present overlying certain benign, premalignant, and malignant lesions such as verruca or seborrheic keratosis, actinic keratosis, and a carcinoma. As a unique entity, TH should be considered when a cutaneous horn shows trichilemmal keratinization.

We describe a case of TH on the right cheek of a 78-year-old woman, which shows typical clinical and
histopathological features.

REFERENCES