Giant Cornu Cutaneum Superimposed on Basal Cell Carcinoma
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ABSTRACT
Cornu cutaneum (CC) is a clinical term that describes the horn-like keratotic lesions extending vertically from the skin. Benign, premalignant or malignant lesions may be present at the base of CC. Seborrheic keratosis and squamous cell carcinoma (SCC) are the most commonly reported benign and malignant forms, respectively. Basal cell carcinoma (BCC) at the base is rare. Here, we report on an 85-year old female patient having multiple CC lesions, one being giant on her face and two of the lesions diagnosed with BCC at the base. This case is of significance due to the presence of giant and multiple CC and detection of BCC at the base of more than one lesion. This present case indicates the need for the treatment of possible malignant lesions underlying CC in the elderly by total surgical excision.

Keywords: Basal cell carcinoma, cornu cutaneum, cutaneous horn, giant

INTRODUCTION
Cornu cutaneum (CC) is a conical or cylindrical hyperkeratotic protrusion consisting of keratin that is superimposed on the skin surface and firmly adhered to each other (1). Benign, premalignant or malignant lesions may be present at the base of CC. Seborrheic keratosis and squamous cell carcinoma (SCC) are the most commonly reported benign and malignant forms, respectively (2). Here we report on an 85-year old female patient having multiple CC lesions, one being giant on her face and two of the lesions diagnosed with basal cell carcinoma (BCC) at the base.

CASE REPORT
An 85-year old female patient was admitted to our polyclinics for a horn-like mass extending from the right cheek toward the chin. According to her history, the lesion appeared three years ago and had grown bigger gradually and then half of it spontaneously broke off which then began to grow again since last year and has undergone its final version. The patient had horn-like lesions also under her right eye, on her right eyebrow and on her left cheek (Fig. 1)

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She said that the lesions were older than six months but could not give clear information about the onset. The brown-eyed patient with skin type of Fitzpatrick Type 3 has worked in the sun for long hours as a farmer for many years. Her dermatological examination revealed a yellowish coloured cylindrical mass about 2 x 2 cm in diameter and 6 cm long, flat, soft base with a hard end portion protruding from her right cheek toward her chin. In addition, there were keratotic plaque lesions, under the right eye with a diameter of 0.3 x 0.3 x 0.5 and on the left cheek above the zygoma with a diameter of 0.3 x 0.3 x 0.5 cm. She had brown-black hypertrophic actinic keratoses on the nose, cheeks, forehead, neck and upper part of the chest as well as on the arms and hands for more than 10 years. Her cervical, submandibular and submental lymph node examinations on both sides were normal. The patient’s lesions were totally excised and histopathological examination was performed. The base of the giant CC was evaluated as nodular type BCC (Fig. 2), the base of the lesion on the same side under the eye was evaluated as mixed type (nodular and infiltrative) BCC (Fig. 3) and the base of the lesions present on the left cheek and right eyebrow were evaluated as actinic keratoses. There was no tumour in the surgical margins and the patient had no recurrence during a six-month follow-up period.

DISCUSSION

Cornu cutaneum is a term that defines hyperkeratotic skin lesions extending vertically from the skin surface either in the shape of a pyramid or cylinder with a yellow-brown colour, which may be between a few millimetres and centimetres in length. Lesions are more common among the inhabitants of sunny regions, the elderly and fair-skinned people (1). Cornu cutaneum localizes most commonly to the face, scalp and ears, lips, neck, shoulders and back of the hands (2). Human papillomavirus (HPV) infection and sun have been considered as aetiologic agents. The finding that lesions can be seen in the genital areas and in the African community supports the role of HPV infection (5). Cornu cutaneum is generally seen as a single lesion. The length of the lesion is often less than 1 cm, resulting from the rupture of the extending lesion due to trauma or surgical removal to avoid further elongation for aesthetic disturbance (4).

Cornu cutaneum is just a morphological definition and the lesion may be benign, premalignant and malignant. Lesions that are reported to be at the base are as follows: seborrhoeic keratosis, histiocytoma, molluscum contagiosum, warts, sebaceous adenoma, keratoacanthoma, hemangioma, leukoplakia, actinic keratosis, Bowen’s disease, SCC, BCC, Kaposi’s sarcoma and sebaceous carcinoma (3). Squamous cell carcinoma remains the most common malignant lesion reported at the base of CC. Although BCC is one of the most common malignant lesions at the base of CC according to classical sources, a detailed scan of the literature shows that case reports regarding this point is not so common. There are less than 10 case reports written in English.

In a study investigating 48 CC on eyelids (7), 39 of the patients had single, three had multiple lesions and the rate of premalignant lesions and malignancy was evaluated as
23.1%. Basal cell carcinoma and SCC were determined as malignant lesions each in two cases; one of the two BCC cases had multiple, whereas the other had single lesions. Corne cutaneum was bigger than 2 cm only in one case which was stated to be SCC. In this study by Mencia-Gutierrez et al., five patients (10.4%) with actinic keratosis were observed (7). In another study focusing on 222 CC lesions regardless of their location, a total of 16 (1 BCC and 15 SCC) lesions (7.21%) were found to be malignant. Multiple lesions were observed in 12 of 211 patients enrolled in this study (6). In another large-scale study, the overall rate of premalignant and malignant lesions in a total of 643 CC lesions was reported as 38.9%. The frequency of premalignant lesions was 23.2%, while the frequency of malignancy (n = 101) was 15.7% and all malignant lesions were found to be SCC (1). In a study conducted in Turkey with 11 cases of CC, eight lesions were found to be benign, two were SCC and one was BCC (8).

According to various reported sources, male gender, older age, presence of sensitivity at the base of the lesion, wide base or low height-to-base ratio, location on nose, ears, scalp, hands and forearm increase the likelihood of premalignant or malignant lesions (1). The presence of large base lesions on sun-exposed areas as well as the advanced age of our patient alerted us to the possibility of actinic keratosis and/or malignancy at the base. Large number of actinic keratoses on the face and neck suggested that there may be SCC deriving from actinic keratosis at the base of CC lesions. However, histopathological examination revealed the presence of BCC in two lesions. This situation reflects the difficulty in assessing lesion located at the base of CC by clinical examination.

A recent study shows that dermoscopic examination may help to distinguish whether the lesions at the base are benign or SCC. The presence of erythema due to increased blood flow at the base supported SCC, whereas the terrace shaped cross-stratification at the sides of the body of the horn and the parallel sequence of dead keratin were in favour of the benign lesion. The probability of terrace-like appearance is low in malignant lesions because of the rapid and unregulated growth (9). The sensitivity of the lesion during palpation and the height being smaller than the diameter of the base suggest SCC. None of these findings alone is sufficient for the diagnosis of SCC; however, their co-presence significantly increases the likelihood of SCC (9).

Our patient was admitted not because of her sensitivity and pain complaints but because of the appearance of the biggest lesion. Although no dermoscopic examination was performed, the easy evaluation of the giant lesion with the naked eye showed a compact layer in the form of a terrace or balcony alongside the body. The body length of the giant lesion was three times the diameter of the base. All these findings were in favour of a benign lesion rather than SCC. Therefore, the above mentioned criteria cannot be applicable to every malignant lesion but mainly to SCC. Because BCC grows slowly, keratin layers are piled on top of each other in regular order like in benign lesions.

As a result, our case is interesting in terms of the presence of multiple and giant CC and detection of BCC at the base of multiple lesions. The present case draws attention to the importance of evaluating the possible malignant lesions underlying CC in elderly patients and represents a good example for the treatment by total surgical excision under safe limits of 3‒5 mm.

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