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Case report

A giant keratoacanthoma of the cheek

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Summary. Keratoacanthoma (KA) is a cutaneous tumor arising on sun-exposed skin and characterized by self-limiting growth and involution. We reported a case of a 92-year-old man presented a 4.5x3.5 cm nodular lesion with a central keratin-filled crater on his left cheek. We performed surgical excision and histopathological examination revealed a keratoacanthoma with perineural invasion. A close follow-up was carried out. (www.actabiomedica.it)

Key words: keratoacanthoma, skin cancer, squamous cell carcinoma

Introduction

The nonmelanoma skin cancers (NMSCs) most frequently diagnosed are basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) (1).

Cutaneous SCC represents an uncontrolled growth of abnormal keratinocytes, arising on sun-exposed skin (2). The precancerous lesion is actinic keratosis (AK), a keratinocyte-derived precursor found predominantly in fair-skinned people, which can advance to SCC in situ, invasive SCC and finally to metastatic SCC (3).

Keratoacanthoma (KA) is a cutaneous neoplasia arising on sun-exposed surfaces and characterized by self-limiting growth and involution. The life cycle consists of three distinct stages (proliferative, stabilization and involutional) and takes about 4 to 6 months (4). The differential diagnosis between this neoplasia and SCC is a challenge due to their similar appearance.

Case Report

A 92-year-old man presented a nodular lesion with a central keratin-filled crater on his left cheek. His daughter reported it appeared about 2 months before as a small nodule and increased in size with fast growth. He was previously visited by a dermatologist who suggested surgical excision.

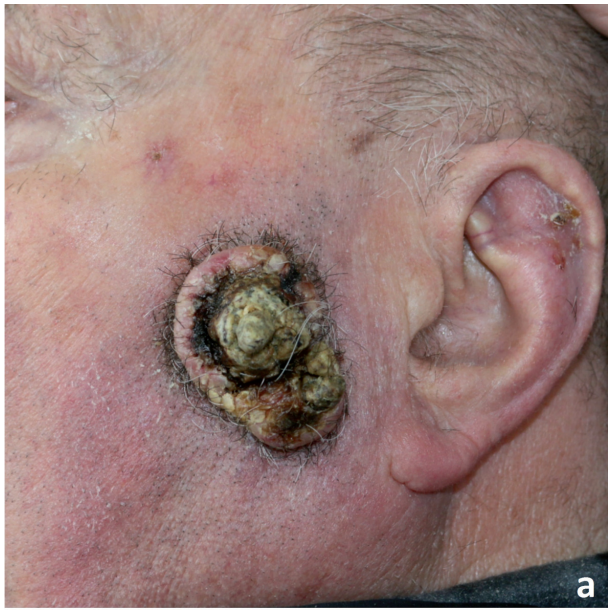
Physical examination revealed a 4.5x3.5 cm skin horn lesion: crateriform architecture filled with a keratin plug, which gave conical projection, no signs of inflammation in peripheral skin and painless (Figure 1a and 1b). There were no palpable regional limph nodes.

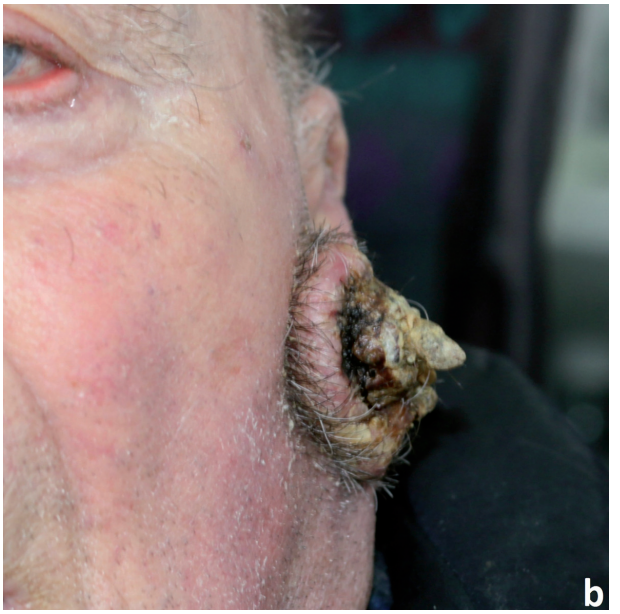
The lesion was excised under local anesthesia and the skin loss was repaired with local advancement flaps. Histopathological examination revealed a "keratoacanthoma-type squamous cell carcinoma" (or only "keratoacanthoma") with perineural invasion.

During postoperative follow-up of 6 months, no recurrence was noted (Figure 1c).

Discussion

Exophytic lesions with a central keratin-filled crater are difficult to diagnose clinically (5). Keratocanthoma and squamous cell carcinoma shares some features so they cannot be confidently differentiated by dermoscopy (6).





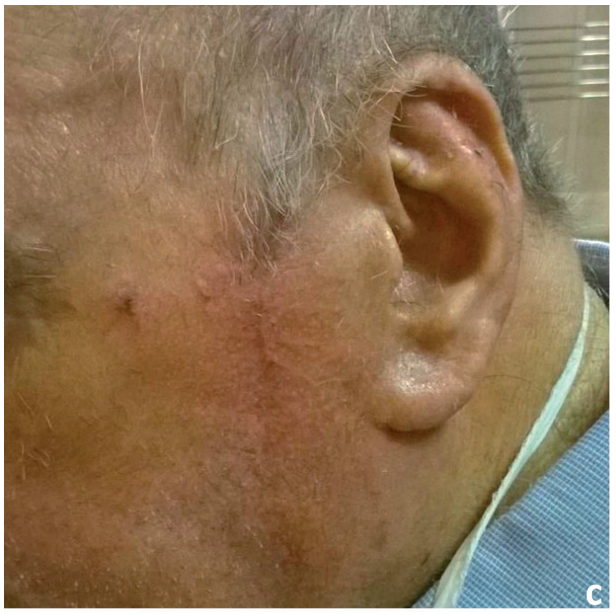


Figure 1. Preoperative and postoperative pictures. a) and b): Keratoacanthoma: a 4.5x3.5 cm skin horn lesion with crateriform architecture filled with a keratin plug and no signs of inflammation in peripheral skin; c: Postoperative image

Histopathological diagnosis allows to classify epithelial crateriform tumors into seven types: crateriform verruca, crateriform seborrheic keratosis, keratoacanthoma (KA), KA with a conventional squamous cell carcinoma (SCC) component (KA-like SCC and KA with malignant transformation), crateriform Bowen's disease, crateriform SCC arising from solar keratosis and crater form of infundibular SCC (7).

Whether KA is benign or malignant is controversial: it can be classified as a benign self-limited squamous proliferation (8), or as a type of well differentiated squamous cell carcinoma (SCC) capable of spontaneous regression (9).

KA is usually solitary but can be multiple (10). It is assumed to originate from the hair follicle: KA exhibits markers corresponding with those found in the follicular isthmus and infundibulum. Its life cycle with proliferative, mature and involutional phases mimics the hair cycle (11).

Perineural invasion of keratoacanthoma is rare (12). Keratoacanthomas of head and neck with perineural invasion have a greater potential for aggressiveness: their spread into the mimic muscles, cranial nerves or sinus cavernosus, local recurrences, metastases in the parotis gland and regional lymph nodes have been reported in literature (13). When perineural invasion is extended, the prognosis can correspond to that of squamous cell carcinoma with perineural infiltration, so a closer follow-up of the patient is recommended (12-14).

Conflict of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article

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