Case report

Facial cutaneous horn in three different conditions: A highlight of a malignancy risk

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ABSTRACT

Introduction: Cutaneous horns are nodules composed of compact keratin that project above the surface of the skin. The purpose of this work is to show the danger that can constitute the cutaneous horns.

Presentation of cases: In this paper, the authors report series of three cases of facial cutaneous horns, which were respectively diagnosed as trichilemmal horn in a 79-years old patient, a cutaneous horn underlying epidermoid carcinoma in a 59-years old patient, and a basal cell carcinoma in an 80-years old patient. All patients were treated by surgical excision.

Discussion: Cutaneous horns are generally asymptomatic and generate above all cosmetic disorders placing the patient in great social discomfort, thus prompting him to seek medical advice.

Conclusion: They emphasize the need for careful management of these lesions because of the high incidence of malignant histology.

1. Introduction

This work has been reported in line with the SCARE 2020 criteria [11].

Cutaneous horns are conical-shaped protuberances formed by very dense keratin. They differ from animal horns by the lack of a central bone. They can appear as a benign, precancerous, or malignant skin pathology in areas chronically damaged by the sun.

These lesions can be located on all parts of the body, with the face and scalp representing 30% of all occurrences [1]. It is a pathology that poses a problem of aesthetic discomfort and can be dangerous if the base of the horn is cancerous. Surgery remains the preferred treatment, especially in the facial area where the incidence of malignancy is much higher [2]. Histopathological assessment of the base of the horn is widely recommended and is essential in the elderly to exclude the possible malignancy [3]. The authors report three cases of facial skin horns and discuss management.

2. Cases presentation

2.1. Case 1

A 79 old man with a history of hypertension disease treated by amlodipine presented with a cheek skin lesion which he first noticed 6 months ago. Clinical examination revealed a 4 cm conic hyperkeratotic lesion yellow-brown in color not painful with an erythematous rounded base (Fig. 1). This lesion was completely excised under local anesthesia and the resulting defect was closed with local advancement of undermined skin flaps from both sides. Histologically the lesion was diagnosed as a trichilemmal keratotic cyst (trichilemmal horn) with no malignancy signs (Fig. 2).

The wound healed well, and no recurrence was observed for the 3 months of following up (Fig. 1).

2.2. Case 2

A 59 years old man with a history of hypertension disease treated by amlodipine presented with a cheek skin lesion which he first noticed 6 months ago. Clinical examination revealed a 4 cm conic hyperkeratotic lesion yellow-brown in color not painful with an erythematous rounded base (Fig. 1). This lesion was completely excised under local anesthesia and the resulting defect was closed with local advancement of undermined skin flaps from both sides. Histologically the lesion was diagnosed as a trichilemmal keratotic cyst (trichilemmal horn) with no malignancy signs (Fig. 2).

The wound healed well, and no recurrence was observed for the 3 months of following up (Fig. 1).

2.2. Case 2

A 59 years old man with a history of cigarette smoking for the past 25 years, with no other past medical history, presented ulcerated lesions with inflammatory-looking fissures in bilateral labial commissures. These lesions are surmounted on the right side by a curved conical
Fig. 1. Cutaneous horn of the left cheek (A) operative specimen of the cutaneous horn (B) (C) 3 months after excision: postoperative outcomes.

Fig. 2. Low and high magnification histological images showing the trichilemmal keratotic cyst.

Fig. 3. Image showing the external cutaneous horn of the right corner of the lip (A); postoperative image (B) and, the specimen of the external cutaneous (C).
hyperkeratotic lesion measuring almost 2.5 cm in length. He first noticed 8 months ago and was gradually increasing in size. The patient mentioned occasional symptoms including itching and no hemorrhagic tendency was related (Fig. 3A).

The Patient underwent under local anesthesia bilateral surgical excision of the lesions, removing the horn on the right. The anatomopathological results concluded a well-differentiated squamous cell carcinoma of the verrucous type with the presence of florid papillomatosis of the edges (Fig. 4). The patient underwent an extensive workup consisting of a neck ultrasound, a thoracic-abdominal-pelvic CT scan which was normal. The planned management was a complementary excision with a bilateral neck dissection. Unfortunately, the patient was lost to follow-up.

2.3. Case 3

An 80 years old woman followed for chronic myeloid leukemia for six years, who developed a facial lesion six months after the introduction of hydroxyurea. The lesion had been evolving for three months, gradually increasing in volume histology showed a well-differentiated invasive epidermal carcinoma of the verrucous type with the presence of florid papillomatosis of the edges (Fig. 4). The patient underwent an extensive workup consisting of a neck ultrasound, a thoracic-abdominal-pelvic CT scan which was normal. The planned management was a complementary excision with a bilateral neck dissection. Unfortunately, the patient was lost to follow-up.

A biopsy-excision of the lesion was done under general anesthesia concomitantly with the removal of the right cheek lesion and, the histopathologic assessment was in favor of basal cell carcinoma. The patient underwent a complementary excision afterward. The patient did not reveal any complications during the postoperative follow-up.

3. Discussion

Cutaneous horns are a protrusion of keratinized material that rises above the surface of the skin. They can be distinguished from animal horns by the absence of a central bone [4]. Although all anatomic sites can be involved, and sun-exposed skin is mainly at risk. Face and scalp account for 30% of all such lesions Other common locations include the ear, lip, chest, neck, and shoulder such as sun-exposed areas [1].

These lesions can grow to various sizes ranging from a few millimeters to several centimeters and can be of multiple different shapes, including cylindrical, conical, straight, curved, and pointed.

The pathogenesis of the cutaneous horn is not fully understood. The horn itself is cornified debris that is of no clinical consequence. It is underlying, albeit largely benign, a pathology that is the primary concern [3] Thus, the important issue when dealing with this lesion is accurate of the nature of the processes at its base, whether premalignant (solar keratosis, arsenical keratosis, Bowen's disease), benign (seborrheic keratosis, viral wart, histiocytoma, inverted follicular keratosis,
Cutaneous horns are asymptomatic lesions of variable size that usually appear on exposed skin areas. There is a high frequency of premalignant and malignant lesions at the base of these lesions. However, surgical removal followed by histopathological examination of these skin horns is recommended to confirm an accurate diagnosis and to ensure aesthetic comfort.

**4. Conclusion**

Cutaneous horns are asymptomatic lesions of variable size that usually appear on exposed skin areas. There is a high frequency of premalignant and malignant lesions at the base of these lesions. However, surgical removal followed by histopathological examination of these skin horns is recommended to confirm an accurate diagnosis and to ensure aesthetic comfort.

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**Ethical approval**

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**CRediT authorship contribution statement**

Faiçal SLIMANI: Correction of the paper

Amina MAADANE: writing the paper

Salissou IRO: Corresponding author writing the paper

**Declaration of competing interest**

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