Claudia Florida Costea1,2*, Gabriela Dimitriu2, Anca Sava3,4, Mădălina Chiliaia5, Cristina Dancă2, Andrei Cucu6, Nicoleta Dumitrescu4 and Dana Turluc7,8

1Department of Ophthalmology, “Grigore T. Popa” University of Medicine and Pharmacy, Iași, Romania
2Ild Ophthalmology Clinic, “Prof. Dr. Nicolae Oblu” Emergency Hospital, Iași, Romania
3Pathology Laboratory, “Prof. Dr. Nicolae Oblu” Emergency Hospital, Iași, Romania
4Department of Anatomy, “Grigore T. Popa” University of Medicine and Pharmacy, Iași, Romania
5Neurosurgery Unit II, “Prof. Dr. Nicolae Oblu” Emergency Hospital of Iași, Romania
6IIIrd year student, “Grigore T. Popa” University of Medicine and Pharmacy, Iași, Romania
7Department of Neurosurgery, “Grigore T. Popa” University of Medicine and Pharmacy and Pharmacy of Iași, Romania
8Department of Neurosurgery, “Grigore T. Popa” University of Medicine and Pharmacy of Iași, Romania

Dates: Received: 13 December, 2016; Accepted: 04 January, 2017
*Corresponding author: Claudia Florida Costea, Assistant, PhD, Senior Ophthalmologist, Department of Ophthalmology, “Grigore T. Popa” University of Medicine and Pharmacy, 34 Brădușa Street, 700374 Iași, Romania, Tel: +40744972648; Fax: +40232–210 064; E-mail: costea10@yahoo.com

Keywords: Eyelid; Cutaneous horn; Surgical excision; Pathology

Abstract

Cutaneous horns are relatively rare benign tumors which occur most frequently on sun exposed skin and develop on various types of underlying skin lesions: benign, premalignant and malignant. The treatment of choice consists in the surgical excision of the lesion to healthy tissue. The histopathological examination is mandatory in order to establish the nature of the lesion, on which the cutaneous horn develops. We are presenting two clinical cases of cutaneous horns of the eyelid diagnosed in a 19 and a 78 year old patient, respectively, which developed on an association of preexisting lesions: chalazion or inclusion cyst, along with moderate dysplasia of the epidermis in both cases.

Introduction

The cutaneous horn (cornu cutaneum) is a circumscribed, conical and keratotic lesion, which can hide benign or malignant lesions [1–3]. The clinical diagnosis is established based on its appearance, the lesion being classified as solitary or multiple, straight, curved or twisted, white or yellow [4,5], most often located at the level of the skin on the patient’s face [4,6,7]. While the cause leading to the formation of cutaneous horns [8] is unknown, UV radiations are believed to be the trigger of this condition [9]. Usually, the cutaneous horn occurs in people over the age of 50, in both genders [10–14].

The cutaneous horn can occur in any part of the body: the malar or frontal areas, dorsum of nose, neck, lips [3], upper eyelids [2,9,12], lower eyelid [15], external ear [3,16], scalp [3,4], upper limbs [3,11,17,18], chest [9], lower limbs [1] and penis [19].

The treatment of choice is the surgical excision of the lesion to the healthy tissue [17,20,21], followed by a histopathological examination in order to confirm the diagnosis [6, 13, 18, 22, 23], the real point of interest being not the cutaneous horn, but the underlying lesion [1].

The cutaneous horn can develop on benign (seborrheic keratosis, viral warts, histiocytoma, inverted follicular keratosis, verrucous epidermal nevus, moluscum contagiosum, etc), premalignant (solar keratosis, arsenical keratosis, Bowen’s disease) or malignant lesions (squamouscellular carcinoma, rarely, basal cell carcinoma, renal metastatic carcinoma, granular cell tumor, sebaceous carcinoma or Kaposi’s sarcoma) [2,3,14].

We are presenting two clinical cases of cutaneous horns of the eyelid diagnosed in a 19 and a 78 year old patients, respectively, which developed on an association of preexisting lesions: chalazion and inclusion cyst, along with moderate dysplasia of the epidermis in both cases.

Case Report

Cutaneous Horn of the Eyelid: Anatomoclinical Implications

Case 1

A 19-year-old male patient, resident in a the rural area, was admitted to the Ophthalmology Clinic for a solitary firm horn on the lower eyelid, which had gradually progressed over the course of two months. One year before, the patient noticed a focal swelling of the inferior eyelid treated empirically, on which the cone shape growth developed progressively. The patient’s medical and ocular history was not significant.

The clinical examination revealed a solitary cone shape hyperkeratotic growth measuring 1.0/0.6 cm in size, with an inflamed nodular base, located in the middle 1/3rd of the inferior
right eyelid (Figure 1). There was no regional lymphadenopathy. The clinical diagnosis was that of solitary inferior right eyelid cutaneous horn. The lesion was excised completely with local anesthesia, and the defect was closed by sliding the skin of the inferior eyelid and sutured with Vicryl (gauge 6.0).

The resection specimen was evaluated histologically, revealing an association of three vertically overlapped lesions: compact acellular keratin, with a "dome" shape (Figure 2), overlying an hyperplastic epithelium showing an infection with human papilloma virus (Figure 3A) and a moderate dysplasia of the adjacent epidermis (Figure 4). Underneath the hyperkeratosis and the hyperplastic epidermis, a chalazion could be identified into the deep dermal structure (Figure 3B). The postoperative evolution was favorable: no scar formation and no clinical relapse for six months.

Case 2

A 78-year-old male patient, resident in a rural area, was hospitalized for a cone shape growth on the upper right eyelid which had gradually progressed for six months. The patient’s medical ocular and general history was not significant. An ophthalmological clinical examinations demonstrated a cone shape hyperkeratotic growth developed on a well-defined inflamed nodular lesion, with ulcerated horn implantation edges, measuring 0.6/0.3 cm in size, in the internal 1/3rd of the upper right eyelid (Figure 5). Moreover, multiple pigmented lesions were noticed on the patient’s face. The biomicroscopic examination diagnosed an incipient cataract in both eyes. There was no regional lymphadenopathy. The clinical diagnosis was that of a cutaneous horn located on a cystic sebaceous lesion on the right upper eyelid. The tumor growth was excised completely through ellipsoidal incision and primary closure of the defect with Vicryl suture (gauge 6.0) was done.

The resection specimen was evaluated histopatologically, revealing an association of three lesions: cutaneous horn (which “detached” from the basis of the underlying lesion, just before the surgical intervention), moderate dysplasia of the underlying epidermis and epidermal inclusion cyst located in the deep dermal structure (Figure 6A–D). The postoperative evolution was favorable: no scar formation and no clinical relapse for a year.
**Discussion**

The cutaneous horn is a clinical diagnosis which refers to a tumor located on the surface of the skin \[14,24\] with a hyperkeratotic cone shape \[3\], white-yellowish in colour, ranging from a few millimeters to a few centimeters in size, which can hide other benign or malignant underlying lesions \[1\].

This tumor is common in Caucasians, less frequent in Asian and Arabic populations, and rare in the African population \[25\].

The age of onset of the cutaneous horn is between 60-70 years old, and the underlying malignant lesions identified are common in people over the age of 70 \[14\].

The first case of cutaneous horn was reported in London, in 1588, in an elderly Welsh woman \[8,9\].

The cutaneous horn is made of compact keratin. The basis can be flat, nodular or „crater–like“. Clinical aspects can not give any clue to differentiate a benign or a malignant lesion, but the indurated and bleeding base of a large tumor pleads in favour of malignancy \[14\]. The cutaneous horn develops most often on sun exposed skin, on a preexisting lesion, such as benign warts or seborrheic keratosis. However, the real pathobiology of the developing of a cutaneous horn on the surface of these lesions remains unknown \[14\].

From a histological perspective, the cutaneous horn is made of compact hyperkeratosis, which can be either orthokeratotic...
order to diagnose potential relapse. In the case of patients a malignant lesion is found, the patient must be assessed in
and, for this purpose, the excision to the healthy tissue is
premalignant or malignant potential of the underlying lesions
horn. The clinical appearance of the lesion can mask the
identifying the nature of the lesion at the base of the cutaneous
the fact that the histopathological examination is essential for
well as the presence of a premalignant lesion, which highlight
presented here, associations of bening lessions were noticed, as
of the base of the cutaneous horn to the healthy tissue.
It showed a moderate dysplasia, and required a larger excision
(epidermal inclusion cyst), but again the epidermis adjacent to
over a period of two months, in Case 1. The lesion on which the
cutaneous horn developed was a benign one, but the epidermis
adjacent to it, showed a moderate dysplasia, so it required a
larger excision of the base of the cutaneous horn to the healthy
tissue.
In the second clinical case, the patient also came from the rural area, being exposed to solar radiations, and the lesion on which the cutaneous horn developed was a benign one (epidermal inclusion cyst), but again the epidermis adjacent to it showed a moderate dysplasia, and required a larger excision of the base of the cutaneous horn to the healthy tissue.
In these two clinical cases of cutaneous horns that we have presented here, associations of bening lessions were noticed, as well as the presence of a premalignant lesion, which highlight the fact that the histopathological examination is essential for identifying the nature of the lesion at the base of the cutaneous horn. The clinical appearance of the lesion can mask the premalignant or malignant potential of the underlying lesions and, for this purpose, the excision to the healthy tissue is essential, in order to prevent relapse.
In the case of the patients with benign lesions, subsequent monitoring is unnecessary.
However, if an association of the cutaneous horn with a malignant lesion is found, the patient must be assessed in order to diagnose potential relapse. In the case of patients with squamous cell or basal cell carcinomas at the base of the cutaneous horn, a screening must be performed to prevent relapses every 3–12 months for first 2 years, every 6–12 months for 3 years, and then at least annually for life [31].

Conclusions
The cutaneous horn is a lesion which, from a clinical perspective, cannot give the physician any indication as to its nature, i.e. benign or malignant; it can mask several benign, premalignant, as well as malignant lesions, and can only be diagnosed through a histopathological examination, which is essential in later therapeutic conduct.

References


