

# Malignant cutaneous horn: a case report

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### SUMMARY

**Cutaneous horn (cornu cutaneum) is rare lesions consisting of keratotic material resembling a horn. It comes in variable size and shape. The lesions typically occur in sun exposed areas particularly the face, nose, ear and dorsal of hands. Cutaneous horn usually is benign in nature, but the possibility of skin cancer should always be considered. Most common premalignant condition is actinic keratosis with squamous cell carcinoma (SCC) being the most common cause of malignancy. Herewith, we are reporting a case of cutaneous horn over the pinna with underlying malignancy at its base for around five years duration. Surgical removal of the lesion had been done and currently he is under routine surveillance. Awareness of such lesions should be made to detect and manage early.**

### INTRODUCTION

Cutaneous horn (*cornu cutaneum*) are relatively uncommon lesions consisting of hyperkeratotic epithelial lesion resembling that of an animal horn. It is defined as having a height that is more than half of the diameter of its base.<sup>1</sup> Cutaneous horn was first officially documented in an older Welsh woman by the name of Mrs. Margeret Gryffith in 1588 which was displayed in circuses worldwide as magical beasts.<sup>2</sup> The lesions typically occur in sun exposed areas, particularly the face, ear, nose and hands. Cutaneous horns are now widely accepted as a reactive cutaneous growth caused by a variety of benign, premalignant or malignant primary processes. Most common cause of benign cutaneous horn is seborrheic keratosis whereas actinic keratosis is the most common premalignant cause. Squamous cell carcinoma (SCC) is the most frequent malignant type seen in cutaneous horn. Therefore, for appropriate histopathological diagnosis such lesion should undergo biopsy at the base of the horn and for smaller lesions excision should be considered.

### CASE REPORT

An 83-year-old man residing in a nursing home was referred to our clinic with persistent discomfort over his right ear. He has hypertension and Parkinson's disease with regular follow up at the local clinic. He has no previous surgical history. The primary caregiver at the nursing home had noticed a horny projection from his ear for the past five years. The growth had been slowly increasing in length. Otherwise, there are no complains of ear discharge, ringing, reduced hearing or facial asymmetry.

On examination, there was a hyperkeratotic growth arising from the medial side of the right helix of his pinna measuring 6 x 3 cm from base to tip (Figure 1). It has a broad base with evidence of hyperkeratosis circumferentially. It caused slight discomfort upon manipulation. Otherwise, it was non-tender and non-warm to touch. Other regions of the right external ear appeared normal. Left ear examination was unremarkable. Otoscopy examination showed a healthy external auditory meatus with an intact tympanic membrane. There was no regional lymphadenopathy. The examination was completed with a full examination of the branches of the facial nerve which were normal. Cardiovascular and respiratory evaluations had been normal. An echocardiography showed normal cardiac functions. Other systematic reviews were unremarkable.

Wedge excision of the cutaneous horn and primary closure of the defect had been done under general anaesthesia (Figure 2). The wound recovered within two weeks without any complications. Histopathological examination revealed malignant keratinocytes with moderately pleomorphic, hyperchromatic and prominent nucleoli suggesting of SCC. The epidermis adjacent the tumour show evidence of actinic keratosis. Lesion appears to be completely excised with more than 5 mm margins. Computed tomography showed no involvement of regional lymph nodes and no distant metastasis.

### DISCUSSION

Cutaneous horn (*cornu cutaneum*) is a conical shaped excessive hyperkeratosis of variable size ranging from few millimeters to several centimeters. Giant horns are horns having the length of more than one centimeter. Unlike animal horns that usually contain an osseous cast, cutaneous horns consist solely of cornified proliferative keratinocytes without a bony component. Histologically, the cutaneous horn shows an abundance of compact keratin protruding from the epidermis.<sup>3</sup> Cutaneous horn are commonly found in the older population between 60 to 80 years of age. The sex distribution of benign lesions is equal among males and females. However there is a greater incidence of premalignant and malignant cutaneous horns in males.<sup>4</sup> Most commonly they are located in areas most vulnerable to ultraviolet radiation such as nose, ears and upper extremities.

Cutaneous horns can be divided into benign, premalignant and malignant lesions. The most common cause of benign

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**Fig. 1:** Hyperkeratotic growth arising from the medial side of the right helix of ear.



**Fig. 2:** Pre-operative preparation before the excision of the cutaneous horn over the right ear.

cutaneous horn is seborrheic or lichenoid keratoses. Other benign causes are infections from human papillomavirus and molluscipoxvirus. Benign cutaneous horns make up around 85% of all cutaneous horns.<sup>5</sup> Actinic keratosis are the most common premalignant cause of cutaneous horn, while squamous cell carcinoma is the most common malignant cause as reflected in our index patient.

Excision biopsy of the lesion and formal histopathological examination to rule out malignancy is recommended for large and broad base cutaneous horns. Malignancies should be excised with appropriate margins and evaluated for metastasis. Treatment options include wide surgical excision

and laser ablation such as carbon dioxide or neodymium-doped yttrium aluminium garnet laser is preferred for aesthetic considerations. Despite these alternatives, total surgical excision remains the gold standard of treatment of choice, ensuring that the base of the horn is preserved for histological examination. For our index patient, he embarked on wide surgical excision to remove the cutaneous horn completely. Subsequently, primary closure of the wound had been made. The patient was seen two weeks later for follow up which showed good healing of the wound. No gapping or keloid formation was seen. In view of adequate margins, and no involvement of regional lymph nodes or metastasis he is currently under active surveillance.

### CONCLUSION

Cutaneous horns are predominantly benign lesions. However, the possibility of nearly 16-20% of the lesions which might be harbouring premalignant or malignant lesions should always be considered. Full thickness excision with adequate margins is the gold standard of treatment of choice to enable detailed pathological examination of the underlying tissue of cutaneous horns.

### DECLARATION OF PATIENT CONSENT

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given his/her consent for his/her images and other clinical information to be reported in the journal. The patient understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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