

An interesting case of cutaneous horn

Rajiv Sonarkar¹, Ashutosh Ghuge², Giriraj Gajendra²

From ¹Associate Professor, ²Junior Resident, Department of Surgery, NKP-SIMS, Nagpur, Maharashtra, India

Correspondence to: Ashutosh Ghuge, Department of Surgery, NKP-SIMS, R No 21, Satpuda Hostel, NKP-SIMS, Digdoh, Hingna Road, Nagpur – 440 019, Maharashtra, India. E-mail: ashm0781@gmail.com

Received - 02 October 2018

Initial Review - 08 November 2018

Accepted - 05 February 2019

ABSTRACT

Cutaneous horn is an uncommon lesion consisting of keratotic material and a clinical diagnosis referred to as, a conical projection of cornified material above the surface of the skin that resembles a miniature horn. The horn is composed of compacted keratin. Cutaneous horns usually develop on a keratinocyte base with the histopathology on a spectrum ranging from benign keratosis to invasive squamous cell carcinoma. Here, we report the case of a cutaneous horn in a 65-year-old male.

Key words: *Cornu cutaneum, Cutaneous horn, Sebaceous cyst*

Cutaneous horn is a relatively uncommon lesion consisting of a projectile, conical, dense, and hyperkeratotic nodule, which resembles the horn of an animal [1]. Historically, it is also referred to by its Latin name, cornu cutaneum, and less commonly and more eponymously, as cornu cutaneum of Rokitansky, after the German pathologist Baron Carl von Rokitansky [2]. The horn is composed of compacted keratin and its base can be flat, nodular, or crateriform.

Cutaneous horns most frequently occur in sun-exposed parts and are typically found on the face and scalp but may also occur on the hands, penis, eyelids, nose, chest, neck, and shoulder. The cutaneous horns are usually benign; however, malignant or premalignant lesions might be associated with it [3]. Most often, this is a benign verruca or seborrheic keratosis; however, cutaneous horns complicate a number of conditions including premalignant actinic keratoses and frank malignancy. More than half of all of the inciting lesions at the base of cutaneous horns are benign, and further, 23–37% are derived from actinic keratosis. Malignancy has been reported at the base of a cutaneous horn in up to 20% of lesions [4-7]. Due to their malignant potential, the lesions must always be considered for histopathological evaluation. The true pathobiology for the formation of cutaneous horns over each underlying base lesion remains unknown. A sex predilection has not been shown; however, the possibility of harboring malignancy at the base of the lesion is increased in men when compared with age-matched women [6,7]. We report the case of a cutaneous horn in a 65-year-old male.

CASE REPORT

A 65-year-old male, farmer by occupation, came to the outpatient department with complaints of a raised, painless growth over the posterior aspect of the right knee for >6 years duration.

On general examination, the patient was vitally stable. The local clinical examination demonstrated a 1 cm × 1 cm golden-colored, cone-shaped keratotic cutaneous horn (Fig. 1). On palpation, the horn was hard in consistency and fixed to the skin. There were no tenderness, discharge, or bleeding associated with the horn.

After careful and detailed physical examinations, the lesion was excised (Fig. 2) and primary closure was done with satisfactory result. The specimen was evaluated microscopically. Microscopically, the horn consisted of a marked hyperkeratosis, papillomatosis with a prominent granular layer, and vacuolated superficial keratinocytes with pyknotic nuclei (Fig. 3). The follow-up was uneventful without signs of recurrence.

DISCUSSION

A cutaneous horn (cornu cutaneum) is a protrusion from the skin consisting of cornified material resembling an animal horn in miniature. However, though grossly similar to horns in animals, they are histologically quite different from them. The animal horns are composed of superficial hyperkeratotic epidermis, dermis, and centrally positioned bone. No such axially positioned well-formed bone is observed in the gigantic human horns.

Historically, London surgeon Everard Home was credited with the earliest descriptions of cutaneous horns in 1791. However, cases from as early as the 16th and 17th centuries have been described in the medical literature. Most notable among these was by the Danish anatomist Thomas Bartholin in 1670 [8]. The earliest well-documented case of cornu cutaneum from London in 1588 is of Mrs. Margaret Gryffith, an elderly Welsh woman. Farris from Italy first described the well-documented case report with adequate histology of gigantic horn in a man [9].

A cutaneous horn (cornu cutaneum) can be derived from a variety of benign or malignant epidermal lesions. The histological



Figure 1: Cutaneous horn over the posterior aspect of the right knee



Figure 2: Excised tissue of cutaneous horn

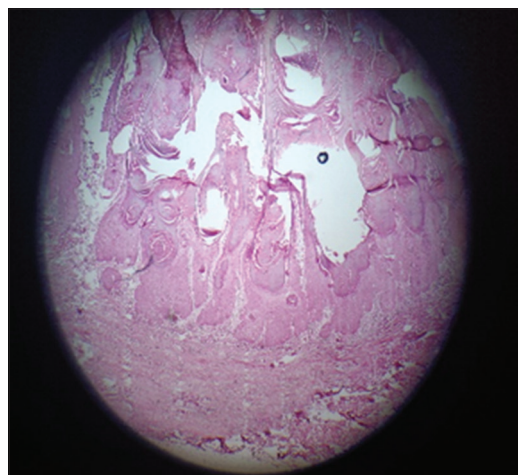


Figure 3: Microscopic picture of the cutaneous horn

appearance of the basal layer of the cutaneous horn is in the spectrum of seborrheic keratosis to infiltrated squamous cell carcinoma (SCC) [2,10]. The important issue is not the horn itself which is dead keratin, but rather the underlying condition, which may be benign (seborrheic keratosis, viral warts, histiocytoma, inverted follicular keratosis, verrucous epidermal nevus, molluscum contagiosum, etc.), premalignant (solar keratosis, arsenical keratosis, and Bowen's disease) or malignant (SCC, rarely, basal cell carcinoma, metastatic renal carcinoma, granular cell tumour, sebaceous carcinoma, or Kaposi's sarcoma). Most

commonly, they are single and arise from a seborrheic keratosis lesion [11,12].

The largest study of 643 cutaneous horns was reported by Yu *et al.* [3]. According to them, 39% of cutaneous horns were derived from malignant or premalignant epidermal lesions and 61% from benign lesions. Two other larger studies on cutaneous horn too showed 23–37% of these to be associated with actinic keratosis or Bowen's disease and another 16–20% with malignant lesions [13,14]. In the study of Bart *et al.*, 44% of patients had underlying malignancy and three of their patients had a history of skin cancers [15]. Spira and Rabonovitz in their study concluded that cutaneous horns in associated with a malignant or premalignant base are more common in patients with a history of other malignant or premalignant lesions [16].

The prognosis is dependent on the classification of the underlying proliferative lesion at the base of the horn (e.g. actinic keratosis and SCC). Cutaneous horns often cause little physical discomfort unless struck or if arising in areas prone to physical irritation. Tenderness at the base of the lesion is often a clue to the presence of a possible underlying SCC [4]. Bleeding at the base of the lesion, as well as larger size, has been suggested as an indication of underlying malignancy [3,8]. Cosmetically, however, they can cause significant concern for the patient, as they can be socially disconcerting. In general, malignant or premalignant conditions are more common in older male patients, especially when the cutaneous horn is found on the face, pinna, dorsum of hands, forearms, or scalp or when it has a larger base or base-height ratio [3].

Histopathological examination, especially of the base of the lesion, is necessary to rule out associated malignancy and full excision and/or reconstruction is the treatment of choice. In our part of the country, exposure to the sun is most common [1,17,18]. Majority of the population is involved in farm activity mostly without sun protection. We believe that sun exposure is the most important etiological factor in the pathogenesis of the cornu cutaneum like other skin lesions. The cutaneous horns are predominantly benign lesions; however, a possibility of malignant potential should always be kept in mind.

CONCLUSION

A cutaneous horn (cornu cutaneum) which is presented as a protrusion from the skin consisting of cornified material is predominantly benign lesions; however, a possibility of nearly one-third of them harboring malignant or premalignant skin lesions should always be kept in mind. Thus, after a detailed physical examination and operative procedure, a histopathological examination, especially of the base of the lesion, is necessary to rule out the associated malignancy.

REFERENCES

1. Korkut T, Tan NB, Oztan Y. Giant cutaneous horn: A patient report. *Ann Plast Surg* 1997;39:654-5.
2. Durkee S. Human horn (cornu cutaneum of rokitansky). *Boston Med Surg J* 1866;74:9-11.

3. Yu RC, Pryce DW, Macfarlane AW, Stewart TW. A histopathological study of 643 cutaneous horns. *Br J Dermatol* 1991;124:449-52.
4. Kumar S, Bijalwan P, Saini SK. Carcinoma buccal mucosa underlying a giant cutaneous horn: A case report and review of the literature. *Case Rep Oncol Med* 2014;2014:518372.
5. Zhou Y, Tang Y, Tang J, Xia B, Dai Y. Progression of penile cutaneous horn to squamous cell carcinoma: A case report. *Oncol Lett* 2014;8:1211-3.
6. Fatani MI, Hussain WM, Baltow B, Alsharif S. Cutaneous horn arising from an area of discoid lupus erythematosus on the scalp. *BMJ Case Rep* 2014;2014:97-9.
7. Jhuang JY, Liao SL, Tsai JH, Chang HC, Kuo KT, Liao JY, *et al.* Extraocular well-differentiated sebaceous tumors with overlying cutaneous horns: Four tumors in three patients. *J Cutan Pathol* 2014;41:650-6.
8. Bondeson J. Everard home, John hunter, and cutaneous horns: A historical review. *Am J Dermatopathol* 2001;23:362-9.
9. Farris G. Histological considerations on a case of a voluminous cutaneous horn. *Minerva Dermatol* 1953;28:159-65.
10. Souza LN, Martins CR, de Paula AM. Cutaneous horn occurring on the lip of a child. *Int J Paediatr Dent* 2003;13:365-7.
11. Akan M, Yildirim S, Avci G, Akoz T. Xeroderma pigmentosum with a giant cutaneous horn. *Ann Plast Surg* 2001;46:665-6.
12. Michal M, Bisceglia M, Di Mattia A, Requena L, Fanburg-Smith JC, Mukensnabl P, *et al.* Gigantic cutaneous horns of the scalp: Lesions with a gross similarity to the horns of animals: A report of four cases. *Am J Surg Pathol* 2002;26:789-94.
13. Thappa M, Laxmisha C. Cutaneous horn of eyelid. *Indian Pediatr* 2004;41:195.
14. Schosser RH, Hodge SJ, Gaba CR, Owen LG. Cutaneous horns: A histopathologic study. *South Med J* 1979;72:1129-31.
15. Bart RS, Andrade R, Kopf AW. Cutaneous horns. A clinical and histopathologic study. *Acta Derm Venereol* 1968;48:507-15.
16. Spira J, Rabinovitz H. Cutaneous horn present for two months. *Dermatol Online J* 2000; 6:11.
17. Gould JW, Brodell RT. Giant cutaneous horn associated with verruca vulgaris. *Cutis* 1999;64:111-2.
18. Kastanioudakis I, Skevas A, Assimakopoulos D, Daneilidis B. Cutaneous horn of the article. *Otolaryngol Head Neck Surg* 1998;118:735.

Funding: None; Conflict of Interest: None Stated.

How to cite this article: Sonarkar R, Ghuge A, Gajendra G. An interesting case of cutaneous horn. *Indian J Case Reports*. 2019;5(1):67-69.

Doi: 10.32677/IJCR.2019.v05.i01.023