A Large Cutaneous Horn of the Glans Penis: a Rare Presentation

Vikas Gupta · Vanilla Chopra · Sidharth Verma

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Abstract Cutaneous horn (cornu cutaneum) is a relatively uncommon lesion consisting of a projectile, conical, dense, hyperkeratotic nodule which resembles the horn of an animal. Cutaneous horns most frequently occur in sun-exposed parts and are typically found in the face and the scalp, but may also occur on the hands, eyelids, nose, chest, neck, shoulder and penis. Their occurrence on the penis is uncommon. We report a 42-year-old man presenting with penile cutaneous horn. The association with malignancy on the penis makes proper identification of these lesions essential. Standard treatment involves local excision, but the presence of malignancy mandates a partial penectomy.

Keywords Cornu cutaneum · Penile cutaneous horn · Glans penis

Introduction

Cutaneous horn is a clinical diagnosis referring to a conical projection above the surface of the skin that resembles a miniature horn. The horn is composed of compact keratin and may be caused by various epidermal changes such as hard nevus, virus wart, molluscum contagiosum, keratoacanthoma, seborrheic keratosis or marsupialized trichilemmal or epidermoid cyst. This term was proposed for lesions in which the height of the keratotic mass amounts to at least half of its diameter [1]. Cutaneous horn is a lesion that appears habitually in photo-exposed zones and/or from chronic irritation, usually on the face and scalp [2]. Cutaneous horn of the penis is a rare condition with less than 100 cases reported in the world. The various predisposing factors for the development

of penile horn are chronic prepuce inflammation, phimotic foreskin, trauma, poor hygiene, relapsing balanoposthitis, viral infection and tumour, especially squamous cell carcinoma [3]. The hyperkeratosis that results in horn formation develops over the surface of a hyperproliferative lesion. Most often, this is a benign verruca or seborrheic keratosis, or it could be a pre-malignant actinic keratosis. A malignancy has been reported at the base of cutaneous horn in up to 16–20 % of lesions with squamous cell carcinoma being the most common type [4]. The incidence of squamous cell carcinoma increases to 33 % when the cutaneous horn is present at the penis [5, 6]. Tenderness at the base and lesions of larger size is often a clue to the presence of a possible underlying squamous cell carcinoma. Because of their malignant potential, the lesions must always be considered for histopathological evaluation [7].

Case Report

A 42-year-old male presented with a raised painless growth over glans penis from last 2 years. Initially it was a small nodule, but in the last 2 to 3 months, it has grown to a cone shape growth. Physical examination revealed a circumcised penis showing a 2.5 cm × 1 cm curved horn like projection arising from the glans penis at 12 o'clock position (Fig. 1). There was no lymphadenopathy. His systemic examination was unremarkable. All the routine investigations were normal including VDRL and HIV tests. A clinical diagnosis of penile cutaneous horn was made and surgical excision of the growth with a rim of normal glandular tissue around the base was performed and primary closure was achieved. Histopathological examination of the growth revealed marked hyperkeratosis, irregular acanthosis and papillomatosis of the epidermis. The rete ridges were bulbous and enlarged. The upper dermis showed dense chronic lymphomononuclear inflammation. No evidence of dysplasia or malignancy seen. The postoperative recovery of the patient was uneventful.

V. Gupta · V. Chopra · S. Verma (✉)
Government Medical College Jammu, Jammu, India
e-mail: sidharth2009@yahoo.com

Fig. 1 A 2.5 cm×1 cm curved horn like projection arising from the glans penis at 12 o'clock position

Discussion

A cutaneous horn (cornu cutaneum) is a protrusion from the skin consisting of cornified material resembling an animal horn in miniature. These horns may arise from a variety of benign, pre-malignant or malignant epidermal lesions. Most commonly, they are single and arise from a seborrheic keratosis lesion [8]. The first case of a cutaneous horn was described in 1854, and since then fewer than 100 cases have been reported [9]. Few cases have been published in the past 25 years [3]. According to the largest study by Yu et al. [10], 61 % of cutaneous horns were derived from benign lesions and 39 % were derived from malignant or pre-malignant epidermal lesions. Two other larger studies on cutaneous horn also showed that 23–37 % of horns were associated with actinic keratosis and Bowen's disease and another 16–20 % with malignant lesions [11]. The important consideration in these cases is not the horn but the underlying pathology which may be benign (seborrheic keratosis, viral warts, hystiocytoma, inverted follicular keratosis, verrucous epidermal nevus, molluscum contagiosum, etc.), pre-malignant (solar keratosis, arsenical keratosis, Bowen's disease) or malignant (squamous cell

carcinoma, rarely basal cell carcinoma, metastatic renal carcinoma, granular cell tumour, sebaceous carcinoma or Kaposi's sarcoma) [12]. Histopathological examination especially at the base of the lesion is necessary to rule out associated malignancy.

Gould and Brodell [13] have reported a giant cutaneous horn associated with verruca vulgaris. Solvian et al. [6] reported a cutaneous horn of the penis associated with squamous cell carcinoma and HPV 16 infection.

Cutaneous horn of the penis is treated by surgical excision with careful histological examination to exclude a focus of malignancy. If malignancy is present in a penile cutaneous horn, the treatment involves partial penectomy with or without regional lymph node dissection [14].

References

1. Gupta S, Thappa DM, Singh S et al (2000) Giant cutaneous horn. *Ind J Dermatol* 45:149–150
2. Vera-Donoso CD, Lujan S, Gomez L, Ruiz JL, Jimenez Cruz JF (2009) Cutaneous horn in glans penis: a new clinical case. *Scand J Urol Nephrol* 43(1):92–93
3. Thappa DM, Rakesh SV, Karthikeyan K (2003) Penile horn overlying verrucous carcinoma. *Indian J Sex Transm Dis* 24:33–34
4. Tauro LF, Martis JS, John SK, Keinear KP (2006) Cornu cutaneum at an unusual site. *Indian J Plastic Surg* 39:76–78
5. Corkerell CJ, Silvis N (2005) Cutaneous horn. In: Taylor RS, Butler DF, Chan EF, Quirk C, James WD, Kligman AM. *e-Medicine specialties>Dermatology>Benign Neoplasms*. E-medicine. p 1–6
6. Solvian GA, Smith KJ, James WD (1990) Cutaneous horn of the penis: its association with squamous cell carcinoma and HPV-16 infections. *J Am Acad Dermatology* 23:969–972
7. Saraf S (2007) Sebaceous horn: an interesting case. *Indian Journal of dermatology* 52:59–60
8. Thappa DM, Laxmisha C (2004) Cutaneous horn of eyelid. *Indian Pediatr* 41:195
9. Jewett PA (1854) A case of horn on the glans penis. *New York Medical Times* 3:9
10. Yu RC, Pryce DW, Macfarlane AW, Stewart TW (1991) A histopathological study of 643 cutaneous horns. *Br J Dermatology* 124:449–452
11. Schover RH, Hodge SJ, Gaba CR, Owen LG (1979) Cutaneous horns: a histopathological study. *South Med J* 72:1129–1131
12. Copcu E, Sivrioglu N, Culhaci N (2004) Cutaneous horns: are these lesions as innocent as they seem to be? *World J Surg Oncology* 2:18
13. Gould JW, Brodell RT (1999) Giant cutaneous horn associated with verruca vulgaris. *Cutis* 64:111–112
14. Rekha A, Ravi A (2004) Cornu Cutaneum—cutaneous horn on the penis. *Indian J Surgery* 66:296–297