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Penile Glans Horn -A Rare Occurrence: A Case Report With A Recent Review

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1. Abstract

The authors describe a case of cutaneous horn on the glans, considered a rare location. A cutaneous horn is a protuberance constituted by compact keratinous material with a hard consistency similar to a horn, which occurs more frequently in photo-exposed areas. The penile horn is problematic to the patients and greatly affects their sexual life. The patients usually ask for treatment due to their ugly looks and difficulty during sexual intercourse.

2. Introduction

Cutaneous horns are also known as cornucutaneum, which are unusual keratinous skin tumours with the appearance of a horn. This clinically appears as a conical projection that is consistently hard and resembles a horn above the skin's surface. [1] Although the cutaneous horn may develop over normal skin, these more often develop over some pre-existing skin conditions like warts, keratosis, nevi, trauma, burns, lupus vulgaris, and even on an epithelioma. [2] Cornucutaneum (cutaneous horn) is a well-defined cone-shaped lesion with hyper-keratotic features. This type of lesion is mostly found on exposed skin. [3] Cutaneous horns rarely occur on the penis [4]. The disease may be benign in 42%-56%, premalignant in 22%-37%, or frankly malignant in 20%-22% of patient [5].

Middle age and elderly individuals are more affected; it occurs more frequently in photo-exposed areas, such as the face, nose, external ears, forearms, and back of the hands. Histopathology of the horn's base may present benign or malignant characteristics that must be differentiated, so a proper surgical procedure should be performed with the histopathological evaluation of its base. With a little >100 reported cases in the literature, cutaneous horn on the glans is considered a rare occurrence. Since 1854 the first case of cutaneous horn located on the penis was reported, and conditions such as chronic irritation, phimosis, surgical trauma, and radiotherapy have been pointed out as possible risk factors for horn formation [6,7]. Cutaneous horns usually are asymptomatic, nontender hard growths. It is inconvenient to the patients and greatly affect their sexual life. The patients mostly seek treatment due to disfigurement and difficulty during sexual intercourse.

Since the penile horn may be benign or malignant, management involves establishing the diagnosis followed by definitive treatment based on histopathology. For benign conditions, excision of the horn is sufficient, and for malignant lesions, partial/total glans resurfacing with a partial thickness skin graft (for lesions up to T1), wide local excision, or, in some cases, penectomy may be required. Penile horns occur as single or multiple lesions. They usually start as warty growths that later become hyperkeratotic and assume the appearance of a horn. The aetiology for the development of the penile horn is not clear. However, various factors in its development include surgical trauma, preputial irritation, long-standing phimosis, virus, radiotherapy or malignancy [8, 9].

3. Case Report

A 60-year-old man presented in surgery OPD with a penile horn for the last 6 months. There was a history of phimosis for that circumcision was done. [Figure 1] It was small in size initially and then gradually increased to a size of around 3.5 cm. There was inguinal lymphadenopathy. He was managed with an excision of the horn and a deep biopsy from the base of the lesion, which showed malignancy. Pelvic CT was within normal limits. The partial penectomy was carried out.

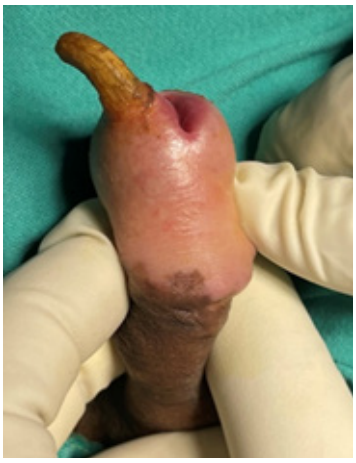

Figure 1

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4. Discussion

A penile cutaneous horn is uncommon and has rarely been reported. Cutaneous horn (synonyms; Cornu cutaneum: Cornu humanum) is a conical, hyperkeratotic protrusion that often resembles an animal horn. The term "cutaneous horn" is a morphologic designation referring to unusually cohesive keratinised material and not a true pathologic diagnosis. The first case of a penile cutaneous horn was described in 1854. Cutaneous horns usually are asymptomatic, nontender hard growths. The patients mostly visit doctors due to their ugly looks and difficult sexual intercourse. It is troublesome to the patients and greatly affect their sexual life. To date, however, its aetiology is still uncertain [4,10]. Although the cutaneous horn may develop over normal skin, these more often develop over some pre-existing skin conditions like warts, keratosis, nevi, trauma, burns, lupus vulgaris, and even on an epithelioma [6]. It may derive from various benign, premalignant, or malignant epidermal lesions [11]. Chronic preputial inflammation, phimotic foreskin, the trauma of circumcision, and viral infection have been implicated in penile cutaneous horn formation [12,13]. The major emphasis is on the long-standing phimosis with chronic, prolonged preputial inflammation, as in our case. In the present case, the penile cutaneous horn formed after an adult circumcision. It is thus hypothesised that the trauma of circumcision preceded cutaneous horn formation. In the current case, there was no palpable inguinal lymphadenopathy. A CT scan of the pelvis was done to detect primary lesions and metastatic disease.

Every case of penile horns should be considered premalignant lesions infrequently associated with squamous cell carcinoma or low-grade malignancy of the penis, as in our case. It was difficult to establish a precise diagnosis of penile cutaneous horn preoperatively due to the lack of typical radiological features. The histopathology report in our case showed malignancy, so partial penectomy was carried out.

Table: Clinical features of the reported series of penile cutaneous horn

Clinical features of the reported series of penile cutaneous horn						
Study	**Pt(n)**	**Age (yrs)**	**Presentation**	**Lesion(cm)**	**Treatment**	**Follow up**
Reis et al 1978 [2]	1	20	Painless Nodule	1.7x0.8	NA	NA
Ponce et al. 1994 [3]	1	79	Painless Nodule	3.0x0.5	Local Excision	NA
Singla V et al. 2004 [14]	1	30	Three Horns	4,2,1 cm	Local Excision	NA
Mastrolorenzo et al. 2005 [4]	1	46	Painless Nodule	1.5x1.5	Excision	6/NER
Vera –Donoso et al. 2009 [1]	1	65	Painless Nodule	2.0x0.5	Local excision	12/NER
Gupta V et al. 2014 [15]	1	42	Nodule	2.5x1.0	Excision	NA
Zhou Y et al. 2014 [12]	1	43	Nodule	2.0x1.0	Partial penectomy	6/NER
Pattabi et al 2015 [10]	1	45	Nodule	NA	Local Excision	NA
Blaschko et al 2015 [16]	1	70	Nodule	3.0x2.0	Excision	NA
Kumar Barolia D et al., 2015 [5]	1	20	Nodule	3	Local Excision	NA
Kraus et al. 2016 [17]	1	49	painless nodule	3.0x3.0	Local Excision	NA
Agarwal A et al. 2018 [9]	1	60	Horn	2.5 cm	Excision	NA
Ying Wan et al. 2018 [18]	1	55	Horn	4x4.5 cm	Excision	9/NER
Prabhakar et al. 2018 [19]	1	22 mon	Two horns prepuce	2.5x1 cm, 0.5x0.5	Circumcision	NA
Sirka CS et al. 2019 [7]	1	60	Penile Horn	1.75cm	Excision	NA
Ribeiro et al. 2021 [6]	1	51	Horn	4 cm	Partial Penectomy	NA
Amit Shah et al. 2022 [20]	1	51	Horn	2cm	Local Excision	NA
Sunder goyal et al. 2023	1	60	Horn	3.5 cm	Partial Penectomy	1y

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5. Conclusion

Penile horn is a rare occurrence. Treatment varies from local excision to partial penectomy. Histopathology is mandatory preoperatively. Due to its malignant potential, long-term follow-up is prudent to observe the clinical behaviour of a penile cutaneous horn. We present a rare case of a penile cutaneous horn that did not recur or metastasise until the last follow-up at 12 months.

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