

Verrucous carcinoma over the penis presenting as nail-like cutaneous horn

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ABSTRACT

Cutaneous horn over the penis presents as a rare conical, hyperkeratotic nodule. About one-third of the cases are associated with malignancy. Herein, we report a case of verrucous carcinoma over the penis, presenting as a nail.

Keywords: Cutaneous horn, verrucous carcinoma

INTRODUCTION

Cutaneous horns are conical, dense hyperkeratotic protrusions above the skin surface, resembling the horn of an animal.^[1] Cutaneous horn rarely occurs over the penis. Herein, we report for the first time cutaneous horn over the penis, presenting as a nail. This case has been presented as it very ingenious and clinically extremely rare.

CASE REPORT

A 40-year-old male presented with a lesion over the genitalia since 2 years. History of circumcision 2 years back for phimosis. The lesion was asymptomatic and gradually increasing in size. The patient was treated with topical salicylic and imiquimod following, with no improvement. History of diabetes. No h/o exposure to risk of sexually transmitted disease.

On examination, a circumcised penis with a nail-like keratotic lesion of 1.3 cm in length extending from the coronal sulcus to the external urethral orifice was present on the dorsal aspect of the penis. The lesion was non-tender

and firm in consistency. No induration of the base was present, with sparing of the urethral orifice. No enlarged regional lymph nodes. Random blood sugar was 172 mg/dL. Complete hemogram was normal. Urine analysis was normal. Tests for HIV antibodies and Hepatitis B surface antigen were negative, and the VDRL test was nonreactive.

Histopathology revealed tumor cells resembling well-differentiated stratified squamous epithelium with hyperkeratosis, parakeratosis and acanthosis. Pushing type of invasion by the tumor cells into the stroma with formation of islands was noted. The stroma had a few lymphohistiocytic infiltrates with few neutrophils. Mitotic figures, nuclear atypia and koilocytes were absent [Figure 1]. A diagnosis of verrucous carcinoma was made, and the patient underwent a local excision with no recurrence after 6 months of follow-up.

DISCUSSION

Compact keratin projecting as nodules above the skin surface are termed cutaneous horn. The earliest documented case of cutaneous horn, or cornu cutaneum, was that of an elderly Welsh woman in London who was displayed commercially as an anomaly of nature in 1588.^[2]

Cutaneous horn can be present on any part of the body, including penis. Penile horn is a clinical term that describes protruding hyperkeratosis, conical in shape, and usually with a bulging erythematous base. Since the first case described in 1854, there have been less than 150 cases worldwide with less than 10 cases reported within the last

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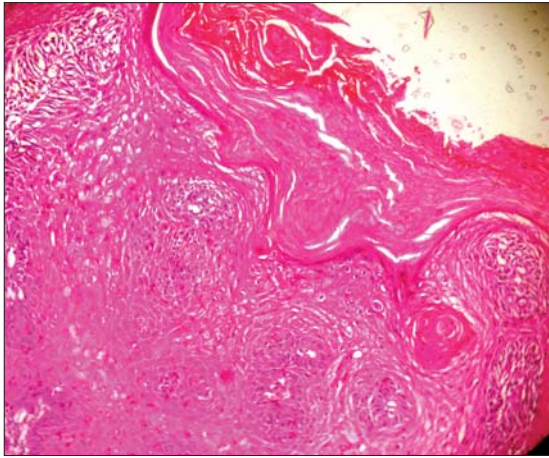


Figure 1: Tumor cells resembling well-differentiated stratified squamous epithelium with hyperkeratosis, parakeratosis and acanthosis. A pushing type of invasion by the tumor cells into the stroma with formation of islands is seen. No mitotic figures and koilocytes. H&E 10 \times .

10 years.^[3] This is the second case of penile cutaneous horn reported by us in the past 2 years, the first being a case of pseudoepitheliomatous, keratotic, and micaceous balanitis.^[4]

The various predisposing factors for the development of penile horn are chronic preputial inflammation, phimotic foreskin, trauma, poor hygiene, relapsing balanoposthitis, post radiotherapy, viral infection like human papillomavirus and molluscum contagiosum, and tumor, especially squamous cell carcinoma.^[5-8]

Long-standing phimosis is given much importance, as it is associated with collection of smegma with maceration, leading to chronic, prolonged preputial inflammation. Adult circumcision generally precedes horn formation within several months within a range of 2 weeks to a year.^[7] Similar finding was noted in our cases, presenting as penile horn, as both cases had preexisting phimosis.

Physical examination of cutaneous horn involves diameter, location, number, color, boundaries, morphology of lesions and its relationship to other structures, e.g., submucosa, tunica albuginea, urethra, corpus spongiosum and corpus cavernosum.^[9]

Physical examination findings of infiltration into the corpora cavernosa along with inflammation and tenderness at the base also favor malignancy.^[9]

Histopathology of verrucous carcinoma reveals well-differentiated keratinocytes with a small nucleus. The tumor invades with broad strands with keratin-filled cysts at the centre, termed as "bulldozing rather than stabbing." Absence of nuclear atypia, individual cell keratinization and horny pearls.^[10]

Confusion exists over the categorization of penile horns.

Few consider all cutaneous horns over the penis as premalignant lesions.^[9] In other studies, only one-third of the cases of penile horns were associated with underlying malignancies.^[7] In our case, the biopsy revealed features of verrucous carcinoma. The tumor grading depends on the degree of involvement of deeper structures like corpora cavernosa, urethra and adjacent structures.^[9] In our case, as there was no involvement of corpora and lymph node involvement, it was graded as stage Ta.^[9]

The various treatment options depend on the grade of the disease and depend on the involvement of deeper structures. CO₂ and Nd:Yag laser, wide surgical excision, glans resurfacing or glans resection is preferred when there is no deeper involvement. Glanssectomy, with or without tips amputation or reconstruction, partial amputation, or total amputation with perineal urethrostomy is preferred, depending on the depth of involvement.^[9]

As verrucous carcinoma is a low-grade malignant neoplasm, and considering its size and the risk of recurrence, we preferred a wide local surgical excision with functional organ preservation.

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