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Urology

PENILE CUTANEOUS HORN: A RARE UROLOGICAL ENIGMA

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ABSTRACT Cutaneous horn is a horn-like hyperkeratotic lesion. Cutaneous horns are seen in sun-exposed areas. Its presence over penis is unusual and rare. Herein, we report a case of horn of penis in a 40 year old male. 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 : Cutaneous horn, Penile horn, Keratosis, Partial penectomy

INTRODUCTION:

Cutaneous horn is a clinical entity referring to a hard cone like protuberant mass of cornified material above the skin the mostly resembles a miniature horn. Cutaneous horn of the penis also called as penile horn is basically a hyperkeratotic lesion mostly arising from penile glans. It is also called as cornu cutaneum or cornu humanum. The horn is composed of compacted keratin like materials. This term was proposed for lesions in which the height of the keratotic mass amounts to at least half of its diameter(1). The usual sites of occurrence for cutaneous horns includes sun exposed areas of the body like scalp and face, making penile horn a rare occurrence. Less than 150 cases have been reported in English medical literature so far. As upto one third of penile cutaneous horns are associated with underlying malignancy, early excision and regular follow up is advocated (2).

CASE REPORT:

A 40 year old male reported to our out patient department with complaints of a hard lesion growing out of his glans penis since 3 years. The lesion started as painless small pea shaped nodule, that has grown slowly over the past 3 years to attain the current size. The patient had no difficulty in voiding however was unable to perform sexual intercourse owing to the mental stigmata associated with abnormal looking penis. On examination his general physical examination was within normal limits. On inspection there was a 5x2cm hard cornified mass growing out of his glans penis dorsally and also involving the dorsal aspect of distal prepuce without involving the external urethral meatus, which was located ventral to the penile horn(Figure 1 & 2). Evidence of balanitis xerotica obliterans (BXO) was noted over the rest of his glans penis. On palpation the horn was hard, cornified, non tender to touch. There was no palpable induration proximal to the horn over penile shaft. There were no palpable inguinal lymph nodes. Systemic examination was unremarkable.

After adequate counselling and pre-operative workup, the patient underwent excision of penile horn with adequate margins and primary wound closure. Histopathological examination of the lesion showed hyperkeratosis, acanthosis and parakeratosis. The base of the horn showed no e/o malignancy. The patient recovered well in post-operative period. The patient is on regular follow up since past 6 months post surgery and there has been no evidence of recurrence(Figure 3).

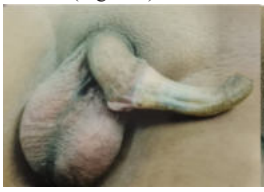

Figure 1

Figure 2

Figure 3: *Post operative image*

DISCUSSION:

A Britain based surgeon is credited with earliest description of penile cutaneous horn in 1791. A thorough search of medical literature suggests case reports of cutaneous horns dating back to 16th & 17th century. These lesions arise commonly in sun exposed areas of body, however may arise in sun protected body parts like penis as a rare entity. The protruding, compact keratin may be the most prominent clinical feature, it is the process at the base of the lesion that is of most clinical importance. More than half of all of the inciting lesions at the base of these horns are benign, and a further 23%–37% are derived from actinic keratoses. Malignancy has been reported at the base in up to 20% of lesions(3). Mostly such lesions are a benign verruca or seborrheic keratosis, but may complicate in a number of conditions, being pre-malignant as in actinic keratosis or as frank malignancy.

Most cases of penile cutaneous horns are reported in old age groups with age being more than 50 years. However our case is that of a 40 year old man with growth noted over the glans penis. Our case has a histopathology suggestive of benign hyperkeratotic lesion with evidence of acanthosis and parakeratosis. The probable reason in this scenario could be chronic irritation due to smegma associated with poor penile hygiene. The various predisposing factors implicated for its development include chronic prepucial inflammation, phimotic foreskin, trauma, poor hygiene, relapsing balanoposthitis, viral infection, and tumor, especially squamous cell carcinoma and verrucous carcinoma(4,5). Human papillomavirus (HPV) infection may be another causative factors. Solivan et al. identified a positive HPV reaction for HPV 16 using in situ DNA hybridization(6).

Surgical excision is primary mode of treatment for penile cutaneous horn followed by biopsy from lesion base. Histopathology of biopsy from lesion base can throw light on the underlying cause of penile horn, either benign or malignant. Laser therapy and administration of

keratolytic agents are other modes of treatment. Best cosmetic results are seen with carbon dioxide laser & Nd-YAG lasers, with least tissue scarring. Partial penile amputation is the treatment of choice if malignancy association is discovered in the histopathological analysis. MRI can be helpful when there is uncertainity about infiltration preoperatively.

CONCLUSION:

Cutaneous horn is a keratinized protrusion over the integumentary system mostly seen over sun exposed areas like the scalp and face. Its occurrence over non sun exposed areas like penis is pretty rare. It can be a benign or malignant entity, hence mandating thorough histopathological examination. If malignancy association is discovered patient should be managed with partial penectomy and regular follow up.

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