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Buschke-Lowenstein Tumor with Penile Localization

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Abstract | **Case Report**

Buschke-Löwenstein Tumor (BLT), also known as Giant Condyloma Acuminatum (GCA), is a rare clinical entity of viral origin, primarily transmitted through sexual contact. Its seriousness is attributed to the risk of local invasion, high recurrence rate, and potential for degeneration. The causative virus is the "human papillomavirus (HPV)" of types 6 and 11. We report a case of a patient presenting with penile condyloma acuminatum, treated with wide-margin excision in a single block followed by an adjacent skin graft. Histopathological analysis confirmed the presence of a Buschke-Lowenstein tumor with high-grade intraepithelial neoplasia. In this article, we describe the clinical presentation, histopathological characteristics of the Buschke-Lowenstein tumor in the penile location, and its management.

Keywords: Buschke-Löwenstein tumor; Genital warts; Human Papillomavirus; penis.

INTRODUCTION

Buschke-Löwenstein tumor (TBL), or giant condyloma acuminata, is a pseudo-epitheliomatous proliferation belonging to the group of verrucous carcinomas. This tumor of viral origin, mainly genital localization, is a rare clinical entity, sexually transmitted [1, 2].

The major risk of this tumor is the possibility of malignant transformation into well-differentiated squamous cell carcinoma. This risk associated with the often-large tumor volume requires adequate treatment based on surgical excision, which alone allows reliable histology, ensures healing and does not compromise subsequent monitoring.

The aim of our observation was to study the clinical, therapeutic and evolutionary aspects of this rare pathology.

OBSERVATION

It was a 62-year-old patient, with a history of unprotected sexual relations with multiple partners, without any notion of homosexuality, a chronic smoker, presented several penile wart lesions, extending to the scrotum, which had been present for 18 months, increasing in size and number with a tendency to ulceration (Figure 1).

Clinical examination found multiple exophytic and irregular warty lesions in cauliflower, brownish in color, others pinkish with infiltration of the base, ulcerated in places, taking over the dorsal side of the penis. The patient also had firm, painless, mobile bilateral inguinal lymphadenopathy (Figure 1).

The workup for sexually transmitted infections was negative.

With this in mind, a biopsy of the tumor was performed, the histopathological examination of which was in favor of condyloma acuminata with high-grade intraepithelial neoplasia.

Given the patient's clinical and histological findings, we performed complete surgical excision of the tumor. Skin coverage was ensured by neighboring skin. The postoperative course was simple (Figure 3).

The anatomo-pathological examination of the surgical specimen shows a macroscopic tumor of 14 cm/8 cm/3 cm, occupied by a large warty and keratotic condyloma. On histology, the hyperacanthrotic papillomatous epidermis. It is the site of high-grade intraepithelial neoplasia lesions with the presence of numerous koilocytic cells on the surface. The excision edges are unharmed. Overall, it is a Buschke Loewenstein tumor with high-grade intraepithelial neoplasia (Figure 3.4).

The patient was seen again at the consultation 15 days later, the local examination was satisfactory with perfect healing of the amputated area, the lymph node areas were free (Figure 5).

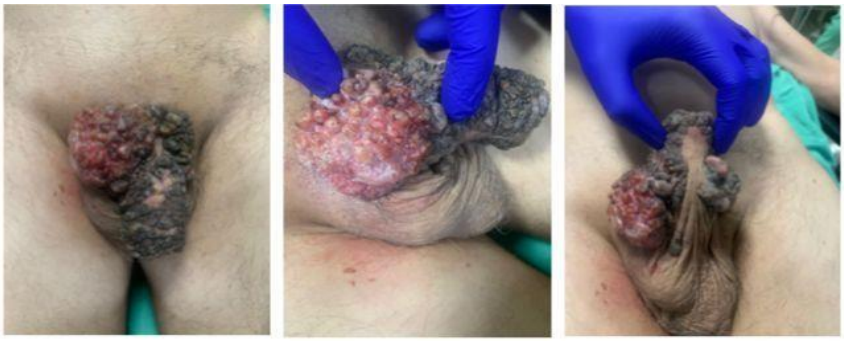

Figure 1: Clinical appearance of cauliflower tumor with budding and vegetating lesions located on the dorsal surface of the penis and the suprapubic region

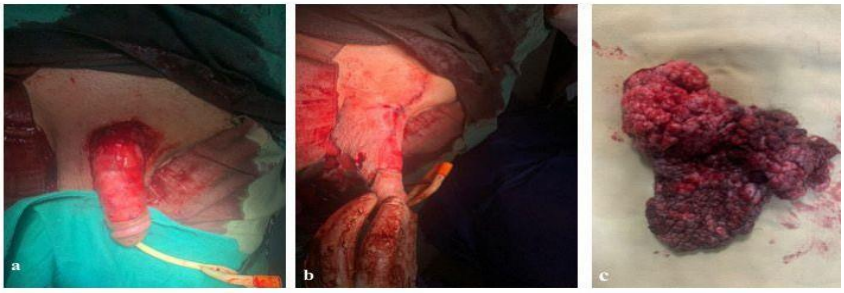

Figure 2: a,b) Postoperative appearance after total excision of the tumor amputating the skin of the proximal half of the dorsal surface of the penis and extending to the suprapubic region; c) macroscopic appearance of the tumor after complete excision

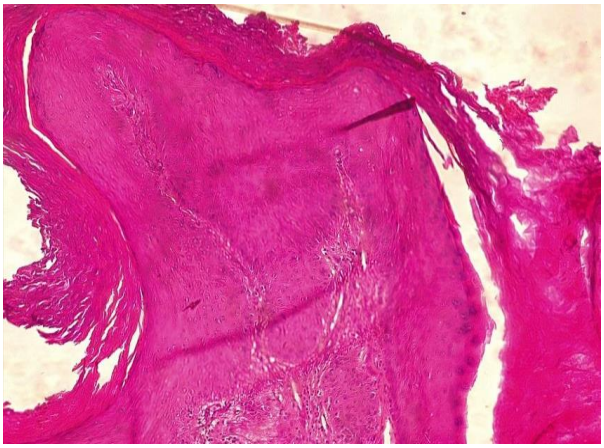

Figure 3: HE x 10: Proliferation producing a papillomatous, hyperacanthosic epidermis

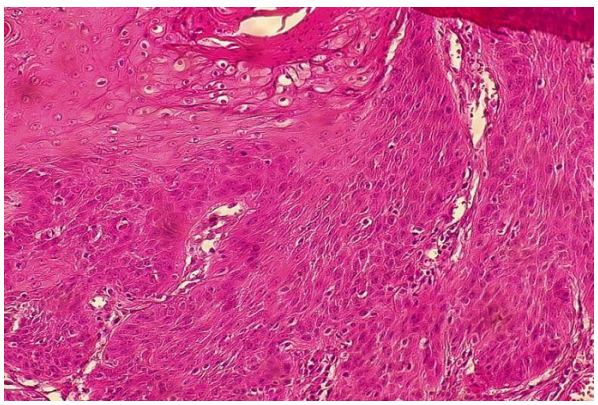

Figure 4: HE x 20: Presence of high-grade intraepithelial neoplasia lesions with numerous koilocyte cells on the surface

Figure 5: Healing of the amputated area after 15 days

DISCUSSION

Buschke Loewenstein's tumor is most often penile in location with the possibility of extension towards the urethra [1,2]; in women it is exceptionally genital [3]. It generally affects men between the ages of 18 and 65.

The viral etiology currently seems accepted because HPV 6 and 11 genomes have been demonstrated in tumor cells [4,5]. Factors play a contributing role in HPV infection, such as multiple sexual partners, repeated local infection, homosexuality, microtrauma and lack of hygiene [6,7].

Clinically it presents as a large, ulcerated and superinfected mass with areas of necrosis with a cauliflower appearance. This macroscopic appearance simulates a locally aggressive and destructive invasive carcinoma [1].

Depending on the location, the extension assessment may include, in addition to palpation of the lymph node areas, a proctoscopy, a gynecological examination, a pelvic tomography or nuclear magnetic resonance [8].

Histologically, TBL is a perfectly limited squamous tumor, characterized by considerable epithelial hyperplasia, sometimes pseudo-epitheliomatous, whose basement membrane is always intact, hyperacontosis, hyperpapillomatosis and koilocytes which are pathognomonic markers of infection by HPV, however their presence is not constant [9,10] .

Malignant transformation in the form of micro-invasive carcinoma or invasive well-differentiated keratinizing squamous cell carcinoma can occur and makes histological examination necessary with serial sections of the entire surgical specimen [9,10].

The Buschke-Lowenstein tumor poses the problem of differential diagnosis with other pathologies. Indeed, certain tumor lesions such as squamous cell or infectious epitheliomas; syphilis in its secondary form, verrucous and vegetating tuberculosis, Nicolas Favre's disease, donovanosis or inguinal granuloma, can simulate TBL at the clinical stage [11, 12,13].

The treatment of choice is surgical because it is the most effective, especially during the early stage of the disease [14, 15] and allows histological analysis of the entire specimen with the search for foci of degeneration [16].

The excision must be as wide as possible, removing a margin of healthy tissue confirmed by the pathological examination. This therapeutic imperative sometimes requires total amputation in cases of infiltrative TBL. In the event of incomplete excision, surgical revision is necessary [17].

Lymphonodal dissection is not indicated except in cases of degeneration. The repair may require neighboring skin or muscle flaps.

The frequency of recurrences and the risk of occurrence of squamous cell carcinoma require prolonged loco-regional clinical monitoring [18].

CONCLUSION

Buschke Loewenstein tumor is a benign tumor whose evolutionary genius is marked by the frequency of recurrences and the potential for malignant transformation. It sometimes poses enormous therapeutic problems, hence the importance of early diagnosis and regular monitoring.
The development of prophylactic vaccination against HPV infection is a very interesting prospect.

Conflicts of Interest: The authors declare no conflict of interest.

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