Case Report

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Successful Non-Surgical Treatment of Buschke-Lowenstein Tumour with 12 Weeks of 5% Imiquimod Alone

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Abstract

Buschke Lowenstein tumour (BLT), also known as giant condylomata acuminata is a rare locally invasive tumour. This cauliflower-like lesion of the anogenital region often arises from a pre-existing warty lesion. It is locally destructive despite a relatively benign appearance on histopathology. It carries a high recurrence rate and a significant potential for malignant transformation into verrucous squamous cell carcinoma. While wide surgical excision has been the mainstay of therapy, use of combination treatments is gaining ground. However, patient-specific issues and complications often render ideal treatment infeasible, with need for innovative approach to therapy. We report the case of a young Indian man with BLT with dysplastic changes, treated successfully with 16-week long monotherapy with 5% imiquimod cream, owing to unsuitability of traditional therapies in his case.

Keywords: Buschke Lowenstein; Genital Wart; Condylomata Lata; Squamous Cell Carcinoma; Imiquimod.

Introduction

Buschke Lowenstein tumour (BLT), is an intermediary lesion between condyloma acuminata and squamous cell carcinoma [1]. However, others and probably a majority of them, equate it to verrucous carcinoma (a well-differentiated variety of squamous cell carcinoma) of the anogenital region [2,3].

Case Report

A 35-year-old married non-promiscuous Indian man presented with a reddish painful nodule over the prepuce of 3-months duration, which had rapidly increased in size with ulceration and seropurulent discharge within past 2 weeks. He denied history of urinary/bowel complaints, vesicular lesions over mucosae, constitutional symptoms or high risk behavior. Examination revealed presence of a single 2 × 3 cm sized, well-defined, firm, tender, irregular erythematous verrucous ulcerated plaque over the preputial undersurface, preputial edema and seropurulent discharge (Figure 1a). Bilateral inguinal lymph nodes were enlarged, but non-tender. Rest of the local and systemic examination was normal. Cytology from lesional smears and cytology was non-yielding. Serology for HIV and syphilis were negative. Histopathological findings included pseudoepithe-liomatous hyperplasia with papillomatosis, and koilocytes (vacuolated cells with clear cytoplasm and perinuclear halo), seen on higher magnification suggestive of HPV infection. In addition, moderate dysplasia was observed (Figure 2), and final confirmation came from polymerase chain reaction (PCR) detection of DNA sequences of human papilloma virus (HPV) type 6. Fine needle aspiration cytology from inguinal lymph node revealed only reactive hyperplasia. The patient staunchly refused any surgical intervention and was a poor candidate for oral retinoids owing to alcohol-induced hepatic dysfunction. He was started on oral antibiotics and anti-inflammatory drugs to treat secondary infection and edema, after which he was suggested to apply imiquimod 5% cream with 12-hours leave-on time, 5 days every week for 16 weeks. A significant reduction in the tumour bulk was

observed at 16th week with focal healing erosions and fibrosis (Figure 1b). A repeat biopsy showed fibroplasia replacing dysplastic foci and mild dermal mononuclear infiltrate. He had no clinical recurrence till 2 years of follow-up.

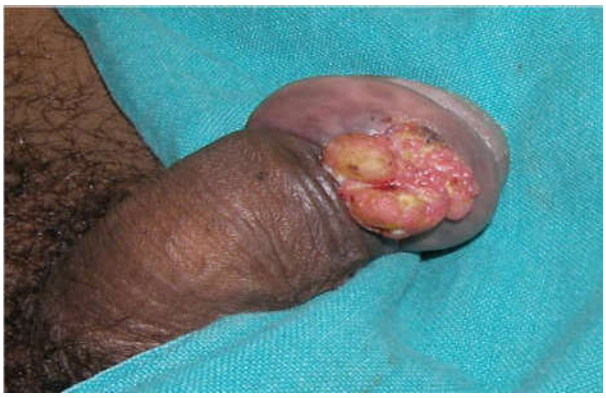

Fig. 1a: Pre-treatment appearance of Buschke Lowenstein tumour - 2 × 3 cm sized, well-demarcated, irregular erythematous verrucous ulcerated plaque over the preputial undersurface with preputial edema and seropurulent discharge

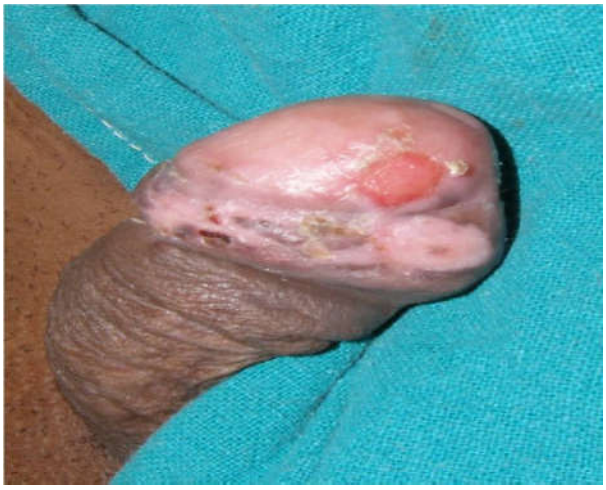

Fig. 1b: Post-treatment photograph of the tumour, after 16 weeks of 5% imiquimod monotherapy revealing almost total reduction of the tumour bulk, with focal erosions and crusting and perilesional fibrosis

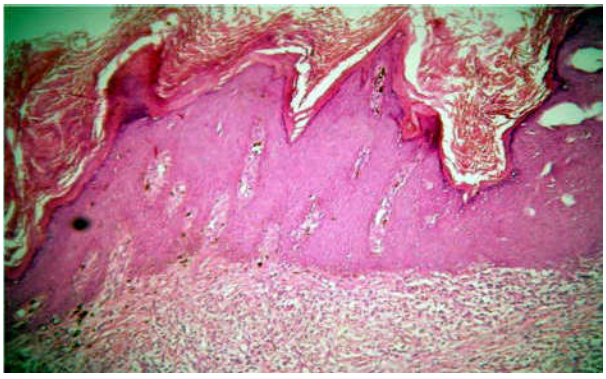

Fig. 2: Histopathological findings of pseudoepitheliomatous hyperplasia with papillomatosis and moderate dysplasia (H & E, 100×)

Discussion

Buschke-Lowenstein tumour (BLT) is a low-grade, locally invasive tumour that lies on the continuum between benign condyloma acuminata and frank squamous cell carcinoma [1]. Often a result of infection with low-risk types of HPV (typically 6 and 11), the lesion is well-differentiated and rarely metastasizes [2]. It carries a substantial risk of evolving into squamous cell carcinoma. Various treatments have been used, with modest response and high recurrence rates; including surgery, cryotherapy, bleomycin, interferon-a, systemic retinoids, radiotherapy, and chemoradiation [3,4]. A combination of treatments is often needed. Indinnimeo *et al.* reported successful treatment of three patients with BLT with associated squamous cell carcinoma, with a combination of local surgical excision and chemo-radiatio [3]. Imiquimod is an immune response modifier, activating macrophage and other cells via Toll-like receptor 7. It has additional anti-viral and anti-tumour properties. Imiquimod inhibits HPV replication and results in the regression of both genital as well as extragenital warts by its combined effect on activation of the local innate immunity, stimulation of interferon-á, and stimulation of T-cell mediated immune response. With respect to its anti-tumoral activity it has been demonstrated that imiquimod stimulates tumor destruction by recruiting cutaneous effector T cells from blood and by inhibiting tonic anti-inflammatory signals within the tumor Although imiquimod has been used in the past for treatment of BLT, it was combined with surgical excision and oral acitretin, reported by Erkek *et al* [4]. We successfully treated our patient, a non-candidate for surgery and oral retinoids, with 16 weeks of monotherapy with imiquimod resulting in lesional clearance and at least 2-year relapse-free period. Although combination therapy remains the mainstay of treatment of BLT, our approach may be attempted in a special case scenario.

References

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