

## Successful Treatment of Buschke-Lowenstein Tumour of the Penis with Carbon Dioxide Laser Vaporization

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Buschke-Lowenstein tumour (BLT) (1) is a rare, anogenital tumour typified by florid warty growth and aggressive invasion into surrounding tissues. Treatment approaches have mostly involved surgery, often radical, and chemotherapy. Recurrence rates are high and appear to be irrespective of treatment choice. We report a case of BLT of the penis that has been successfully treated by a single treatment with carbon dioxide laser without adjunctive chemotherapy.

### CASE REPORT

A 42-year-old heterosexual married man presented in 1999, with a 3-year history of an enlarging, bulky, warty lesion on the glans penis that had gradually grown from a smaller original lesion. He had no prior history of genital wart infections but had been circumcised several years previously for phimosis. A wedge biopsy was taken. The histology was consistent with BLT.

Initial consideration was given to radical surgery (distal amputation of the penis) or, alternatively, micrographic (Mohs) surgery. However, in order to preserve as much tissue and function as possible, and to treat the lesion expeditiously, carbon dioxide laser vapourisation was performed. The procedure was carried out under general anaesthesia. A Sharplan 1040 carbon dioxide laser was used with a 125 mm hand piece. The lesion was initially debulked using high power densities (40 watts output, continuous wave, defocused beam). The output was then reduced to 15 watts and under operative microscopic control the tumour was vaporised down to normal tissue. In 2 areas the tumour extended deeply into subcutaneous tissue, over the dorsum of the glans and inferiorly around the corona. At these 2 sites, electrosurgery was required to obtain haemostasis. The patient stayed in hospital overnight to ensure normal micturition. Granulation and re-epithelialisation took 3 months. The outcome is a normal looking glans with a minimally scarred surface. Full erectile function and normal micturition have been preserved. There has been no recurrence over more than a decade of surveillance.

### DISCUSSION

To the best of our knowledge this is the first published case of penile BLT treated with carbon dioxide laser

successfully and showing no recurrence over 10 years of follow-up. Maximal tissue conservation, excellent cosmesis and full preservation of penile function has been achieved in this young, sexually active patient.

Locally the BLT behaves like a carcinoma with aggressive local growth and invasion into surrounding tissue. Morbidity occurs as a result of tumour expansion into important local structures and death occurs in about 20% of patients. There have been reported cases of malignant transformation of BLT into squamous cell carcinoma which can therefore show metastatic spread (2). A number of different treatments have been deployed but because of the rarity of this tumour there have been no controlled trials. Surgery is a well-established conventional option, although usually needs to be extensive given the bulky nature of these lesions. The result is often disabling for patients and recurrence may be as likely as with other treatments.

Systemic and intralesional chemotherapy has been tried, as monotherapy or as an adjunct to surgery, such as with 5-fluorouracil and cisplatin. Intralesional interferon has been effective for deeply invading lesions but requires frequent treatments for a lengthy time period (3). Recurrence of the tumour is common, up to 67% in a one series (4), and appears to be regardless of treatment type.

Only a few case reports of BLT treated by laser have appeared, especially in the English literature (5–9). Lenk et al. (7) treated two patients with superficial penile tumour with neodymium-YAG or carbon dioxide laser. Gilbert & Beckert (8) and Hohenleutner et al. (9) treated one patient each with neodymium-YAG and carbon dioxide respectively but with concomitant systemic interferon. More recently there have been case reports of successful treatment of perianal BLT with carbon dioxide laser ablation, following surgical excision (10) or after initial imiquimod treatment (11). The use of carbon dioxide laser treatment of BLT in the perineum and vulva has been reported by Frega et al. (12). Although there have been other cases of penile BLT treated with carbon dioxide laser, this is the first case to show no recurrence despite protracted follow-up.

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