Buschke–Lowenstein tumour of glans penis

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1. Introduction

Buschke–Loewenstein tumour (BLT), also known as Giant condyloma acuminatum, is a rare, sexually transmitted disease that affects the anogenital region. BLT is a slow-growing cauliflower-like tumour, but unlike simple condyloma, it is locally aggressive and destructive. 1–3 BLT was first described in 1896 by Buschke and Loewenstein in 1925. They observed a penile lesion that clinically resembled both common condyloma acuminata and squamous cell carcinoma, but differing from both of them regarding the biological behaviour and the histopathological appearance. GCA can be differentiated from ordinary condylomas by the characteristic “pushing” rather than “infiltrating” effect that tends to compress and displace the underlying tissue.

CONCLUSION: We have successfully treated a penile BLT with surgical excision and no recurrence up to 6 months. Surgical excision could be considered an effective therapy in the treatment.

2. Case report

A 45 year uncircumcised male patient presented to NIMS Hospital, Jaipur with complaints of cauliflower like growth on glans penis. The growth started as a small papule on the corona sulcus at 12 O’clock position 6 months back. Patient developed pain and dysuria due to compression of urethral meatus. Patient has history of multiple sexual partners.

DISCUSSION: BLT, first described by Buschke and Loewenstein in 1925. They observed a penile lesion that clinically resembled both common condyloma acuminata and squamous cell carcinoma, but differing from both of them regarding the biological behaviour and the histopathological appearance. GCA can be differentiated from ordinary condylomas by the characteristic “pushing” rather than “infiltrating” effect that tends to compress and displace the underlying tissue.

CONCLUSION: We have successfully treated a penile BLT with surgical excision and no recurrence up to 6 months. Surgical excision could be considered an effective therapy in the treatment.

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were obtained in 4 weeks. So, partial glansectomy and immediate reconstruction of glans penis with preputial flap and meatoplasty was done under General Anaesthesia. Electrocauterization was also done. Attempt was made to conserve glans.

2.1. Procedure

Conservative surgery of glans penis was done through a circumferential subcoronal incision of about 5 mm from corona in order to retract the penile shaft skin. Provided margins measured at least 5 mm, a deep tumour shaped incision was made on the glans and the surrounding tissue was meticulously excised. Once the margins were free, glans reconstruction and meatoplasty was satisfactorily achieved by using the preputial and coronal pedical flap.

2.2. Follow up

Patient was followed for a period of 6 months. He was able to resume his sexual function after 3 months, with good penile erection. There was no relapse of the tumour up to 6 months.

3. Discussion

BLT was first described by Buschke and Lowenstein in 1925.\(^\text{10}\) They observed a penile lesion that clinically resembled both common condyloma acuminata (venereal warts) and squamous cell carcinoma, but differing from both of them regarding the biological behaviour and the histopathological appearance.\(^\text{32}\) They described it as ‘cauliflower-like growth usually localized to the glans penis’ and considered it to be a low-grade, well-differentiated carcinoma displaying a marked tendency to compress and displace deeper tissues.\(^\text{10}\)

GCA can be differentiated from ordinary condylomas by the characteristic “pushing” rather than “infiltrating” effect that tends to compress and displace the underlying tissue.\(^\text{17}\)

Features of Buschke–Lowenstein tumours are ulcerated, fungating masses, and the characteristic histological pattern is showing both endophytic and exophytic growth with undulating papillomatosis of densely keratinized, well-differentiated squamous epithelium.\(^\text{11}\) CT scans can be used to demonstrate the exact location and extent of BLTs.\(^\text{12}\)
A high incidence of GCA has been reported in the homo and bisexual populations and recurrent aggressive GCA has been reported in HIV positive patients.\textsuperscript{21} It is well established that benign genital warts (condylomata) are caused by human papillomaviruses (HPV): HPV type 6 (HPV 6) or HPV 11 can be detected in over 90\% of these lesions,\textsuperscript{18,19} and it has shown that in vitro infection of human cervical tissue explants with these HPV types elicited a histological picture typical for genital warts.\textsuperscript{20}

Treatment of GCA can be classified into three types: topical therapy (e.g., using podophyllin, fluorouracil, or radiotherapy), tumour removal (e.g., by cryotherapy using liquid nitrogen, CO\textsubscript{2} laser therapy, electrocautery, or surgical excision), and immunotherapy (e.g., using imiquimod).\textsuperscript{13–15} However, no gold standard currently exists for treating this rare disease, and the choice of treatment depends largely on the physician's experience and skills.\textsuperscript{16}

Podophyllin, although a useful topical remedy for ordinary condyloma acuminata, has repeatedly proved valueless for treating Buschke–Lowenstein's tumour.\textsuperscript{26–30} Such lesions, instead, are often subjected to electrocautery or surgical excision. In this patient, the lesion responded satisfactorily to surgical excision and electrocautery.

The majority of authors agree that surgery is the treatment of choice and is effective especially in the early stages of the disease.\textsuperscript{23} Wide local excision remains the mainstay of therapy, that can be followed, if it is necessary, by delayed split thickness skin grafts.\textsuperscript{1,2,24,25}

Hatzichristou et al.\textsuperscript{31} presented a series of cases in which they performed curative glandectomies, sparing the remainder of the penis. This may be an appropriate alternative in cases where the tumour is definitely limited to the glans.

4. Conclusion

BLT is a very rare sexually transmitted disease characterized by giant slow growing condyloma acuminata that is, unlike simple condyloma, locally aggressive and destructive. It is fairly easily diagnosed. Although there have been isolated reports of successful treatment with various more-conservative modalities. Here we had successfully treated a penile BLT with surgical excision and no relapse up to 6 months. So surgical excision could be considered an effective therapy in the treatment.

5. Consent

Written informed consent was obtained from the patients for publication of this case report and any accompanying images.

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Conflict of interests

The authors declare no conflict of interests.

Ethical approval

Ethical approval has been given by the Ethical Committee in the Department of General Surgery. Reference number is 395/13.

Author contributions

Dr Sunil Kumar Agarwal contributed in study concept, treatment and guidance for article writing. Dr Gaurav Kumar Nirwal contributed in study design, data collection, data analysis. Dr Harendra Singh contributed in interpretation and writing the paper.

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