



Electrocautery Resection, Shaving with a Scalpel, and Podophyllin: a Combination Therapy for Giant Condyloma Acuminatum

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Giant condyloma acuminatum (also known as Buschke-Löwenstein tumor) is a rare disease, for which the treatment of choice is still controversial. In the case described in this report, we used a combination of electrocautery and a surgical scalpel to resect a huge genital wart, followed by long-term local treatment with podophyllin. This procedure was relatively fast, easy to perform, involved minimal bleeding, and did not result in any complications. Moreover, combination therapy enabled us to avoid deep resection of the lesion and consequently, sexual function was preserved completely.

Key Words: Buschke-Löwenstein tumor; Condylomata acuminata; Human papillomavirus 6, Human papillomavirus 11; Warts

Condyloma acuminatum is a sexually transmitted disease caused by human papillomavirus (HPV). Genital warts, which can easily be managed with local treatments, are the hallmark of this disease, especially when caused by HPV 6 and 11 [1]. However, genital warts may sometimes develop into large anogenital masses that are refractory to routine therapeutic modalities.

The giant form of this disease, which is known as Buschke-Löwenstein tumor, is rather rare, comprising no more than 0.1% of genital warts. Buschke-Löwenstein tumors mostly affect middle-aged men, with a male to female ratio of 3 : 1 [1]. Medical and surgical approaches are commonly utilized to treat this condition. Multiple reports have demonstrated the utility of medical approaches, including the injection of aminolevulinic acid, chemoradiotherapy, and immunotherapy [2]. In addition, it has

been shown that systemic therapy can bring about improved long-term results, with lower recurrence rates compared to surgical ablation [2].

Two types of surgical approach exist. One surgical modality involves extensive resection with the complete excision of all layers of the skin, together with flap or graft reconstruction [3]. Although this method leads to a low recurrence rate, it also has a high morbidity rate, is time-consuming, and is quite expensive.

Physically ablative therapies such as cryotherapy, electrocautery, simple resection, and CO₂ laser therapy are often highly effective in the short term, with clearance rates of 70% to 80%, but the recurrence rate after these therapies can be as high as 25% to 39% [4].

In this report, we present a case of giant penoscrotal condyloma acuminatum responsive to multimodal therapy.

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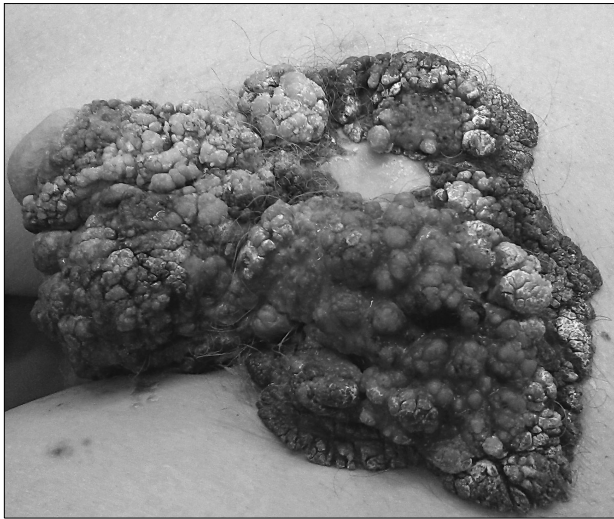


Fig. 1. Giant condyloma acuminatum covering the penis, scrotum, and inguinal area.

CASE REPORT

A 62-year-old man was referred for management of giant condyloma acuminatum (Buschke-Löwenstein tumor) in the suprapubic, scrotal, and penile regions (Fig. 1). He suffered from genital warts, which had grown gradually over the course of two years, but had not sought treatment because of socioeconomic difficulties. Other than hepatitis C virus infection, he did not have any comorbidities.

As the lesions were hemorrhagic and infectious, antibiotic therapy was initiated. After infection control, he was scheduled for an operation. The bulk of the wart was rapidly reduced, using monopolar cutting cautery under regional anesthesia. We attempted to limit the resection to approximately 2 to 3 mm above the skin surface, although sometimes the cautery inadvertently went deeper, affecting the dermis. The remnants of the wart were shaved from the skin using a surgical scalpel, blade number 20, held at a 45-degree angle to the skin. Meanwhile, we shaved the superficial epithelium in order to reach the basal layer, which was demarcated with tiny hemorrhagic points that were controlled with coagulation cautery.

The procedure was accomplished in a short amount of time and did not involve significant bleeding. Moreover, due to the resection of the tumor near the surface of the skin using electrocautery, it was easy to shave the remnants of the tumor with a scalpel.



Fig. 2. Genital appearance after treatment.

The patient was discharged two days after the operation. After about two weeks, the de-epithelialized skin was wet and showed discharge, which was treated with outpatient mupirocin dressing administered two to three times a day. In the third week after the operation, the skin dried gradually and evidence of re-epithelialization was obvious (Fig. 2). Small patchy areas of remaining lesions and areas of rapid recurrence were observed at this visit. The remaining warts were managed with 5% topical podophyllin solution and cryoablation with liquid nitrogen, which has been continued on demand.

A pathology report confirmed the clinical diagnosis, and showed no signs of malignancy or premalignancy. However, we did not use DNA testing to determine the type of the HPV virus.

After one year of follow-up, the patient has no complaints, is satisfied with occasional podophyllin therapy at home, and his sexual function has been completely preserved.

DISCUSSION

In addition to its unattractive appearance and the fact that it is sexually transmittable, giant Buschke-Löwenstein tumors manifest with bleeding, pain, purulent secretions, and unpleasant odors. In the past, Buschke-Löwenstein tumors were not considered premalignant lesions, but it is now recognized that they can develop into squamous cell

carcinoma after an average of five years [2].

These giant lesions can be treated by topical therapy (podophyllin, fluorouracil, or radiotherapy), surgical removal of the lesion (cryotherapy, CO₂ laser therapy, electrosurgery, or surgical excision), and systemic therapy (chemotherapy, immunotherapy, or aminolevulinic acid). However, no standard approach currently exists for the management of this condition, and the choice of treatment mainly depends on the preferences of the patient and/or physician [5].

For our patient, topical therapy with podophyllin or fluorouracil was not indicated, as these treatments are not recommended for very large warts. Moreover, we did not have much experience with systemic therapy for this disease, so we decided to remove the lesion surgically.

The lesion had covered the penis and scrotum, meaning that the preservation of sexual function was a major concern. In simple ablative therapy, it is generally recommended to destroy the tissue to a depth of at least 5 to 8 mm in order to avoid recurrence [6]. In our case, in order to prevent any injuries to the penis and its functions, we used electrocautery resection for tumor debulking, followed by shaving the lesion from above the skin in order to preserve the skin and the underlying sensory nerve endings. Consequently, regrowth of the lesion three weeks after the operation was expected [7]. Thus, further local treatment involving with podophyllin home therapy and office-based cryotherapy with liquid nitrogen was inevitable, and such therapeutic strategies have been recommended in the literature [1].

Other surgical approaches, such as radical and deep excision of the affected area and the use of grafts or flaps, do not require any postoperative topical therapy, as the entire infected epithelium is excised surgically. However, this approach is expensive, and can lead to complications related to having an operation time of more than three hours, the dehiscence of flaps or grafts, long-term hospital admission with the administration of intravenous broad spectrum antibiotics, antithrombotic prophylaxis, and the possible immobility of the patient [8]. Considering these potential shortcomings, we decided not to use deep excision and grafting.

Our operation lasted only one hour, and the patient got out of the bed and was mobile on the first postoperative day. He was discharged on the third day after the operation. After one year of follow-up, the patient was still satisfied with the treatment and with his sexual function.

The combination of three methods of therapy (electrocautery resection, scalpel shaving, and topical podophyllin) for genital condyloma acuminatum was able to control the lesion effectively in our patient with minimal drawbacks. Further research is necessary to demonstrate the optimal depth of cautery ablation for penile lesions.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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