

Extensive condyloma acuminata: Complete remission after topical 5% imiquimod in an HIV patient

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ABSTRACT

Condyloma acuminata are genital warts caused by HPV [6,11]. The therapeutic arsenal includes chemical, immunomodulatory, and physical treatments. In seropositive patients, condyloma may be refractory to treatment. Herein, we report the case of extensive anogenital condyloma treated with 5% imiquimod monotherapy. A twenty-year-old, HIV-positive, female patient consulted for venereal vegetations evolving over the past four months. Multiple vegetative lesions with verrucous surfaces were found on the vulva together with cauliflower-shaped lesions on the anus. The dermoscopic and histological appearance was in favor of condyloma acuminata without signs of malignancy. The patient was initially started on trichloroacetic acid with no clear improvement and, then, administered 5% imiquimod at a rate of two applications per week. Complete remission was obtained after only four months. In HIV patients, condylomas present an important risk of extension, therapeutic resistance, and dysplastic lesions. In our case, imiquimod monotherapy was sufficient to achieve complete remission.

Key words: Condyloma, Imiquimod, Sexually transmitted infections

INTRODUCTION

Condyloma acuminata are genital or perianal warts caused primarily by human papillomavirus (HPV) types 6 and 11.

In seropositive patients and in homosexual males, the prevalence of anal HPV infection is particularly high (45% to 95%) [1]. As in HIV-negative individuals, genital warts may be refractory to treatment and tend to be transformed into giant warts (Buschke–Löwenstein tumors), whose main risks are the capacity for invasive growth, with high rates of recurrence after resection (66%) and a high incidence of malignant transformation (56%) into invasive squamous cell carcinoma [2].

The optimal strategy for this disease has not been fully determined. The therapeutic arsenal involves three methods: chemical treatments (podophyllotoxin, 5-fluorouracil, podophyllin, trichloroacetic acid), immunomodulatory treatments (imiquimod), and

destructive or ablative physical treatments (cryotherapy, laser, electrosurgery, surgical excision) [2].

Herein, we present a case of extensive anogenital condyloma in an HIV-positive patient treated with 5% imiquimod monotherapy.

CASE REPORT

This was a twenty-year-old, HIV-positive patient with a history of unprotected sexual intercourse and on antiretroviral treatment for the past six months. The patient consulted for venereal vegetations evolving over the past four months with a rapid increase in size causing pruritus and itching with an important alteration in the quality of life.

A clinical examination revealed vegetative vulvar lesions with multiple verrucous surfaces of pinkish color and confluent (Fig. 1a). At the anal level, there were

How to cite this article: Chagraoui H, Hali F, Marnissi F, Chiheb S. Extensive condyloma acuminata: Complete remission after topical 5% imiquimod in an HIV patient. Our Dermatol Online. 2025;16(1):52-55.

Submission: 02.04.2023; **Acceptance:** 03.08.2023

DOI: 10.7241/ourd.20251.8

cauliflower-like vegetations, with the largest measuring 3 cm (Fig. 1b). There was no involvement of the oral mucosa. Anoscopic and rectoscopic examinations showed no intra-anal involvement. Hepatitis B and C and syphilis serologies were negative.

The dermoscopic pattern revealed a relatively long papillomatous structure in clearly separated fingers and mosaic structures. At the periphery of the lesions, there were scattered pigmentations. The vascular pattern was characterized by a glomerular and dotted appearance surrounded by a whitish halo (Fig. 2).

We completed a histological study in order to eliminate a degeneration, which revealed a polypoid formation covered with a squamous mucosa. The lining was hyperplastic and papillomatous, with hyperthokeratosis and neutrophilic exocytosis. The dermis was the site of a diffuse inflammatory infiltrate consisting of neutrophils, eosinophils, lymphocytes, and plasma cells with numerous congestive vessels. There were no signs of malignancy. This concluded to the appearance of condyloma acuminata.

Therapeutically, we put the patient on 50% trichloroacetic acid for two months without any clear improvement; then, we administered 5% imiquimod cream twice a week. After four months, there was a clear regression of the lesions and a significant improvement in the patient's quality of life, with a follow-up of ten months (Fig. 3).

DISCUSSION

The correlation between human papillomavirus (HPV) and HIV infection has been the subject of several studies, and numerous case reports exist in the literature describing a giant form of condyloma acuminata, perianal involvement, extensive lesions, and severe painful ulcerations more frequent in the HIV-positive group.

In an Indian study by Shikha Chugh et al. [3], a quarter of HIV-positive patients (sixty patients) with genital warts were resistant to conventional treatment.

Given the increased risk of dysplasia and squamous neoplasia in HIV-positive patients, the presence of atypical warts or multiple relapses should be grounds for HIV screening [3].

Imiquimod is a nucleoside analogue of the imidazoquinoline family. As an immune response modifier, it activates natural killer cells, macrophages, and other immune cells via toll-like receptors [4].

The topical application of 5% imiquimod stimulates both innate and cell-mediated systems to tumor and viral antigens. Interferon α , IL 1, 6, 8, 10, and 12 are produced by monocytes, keratinocytes, Langerhans cells, and T lymphocytes to inhibit viral activity and promote



Figure 1: (a) Vegetative vulvar lesions. (b) Cauliflower perianal lesions.

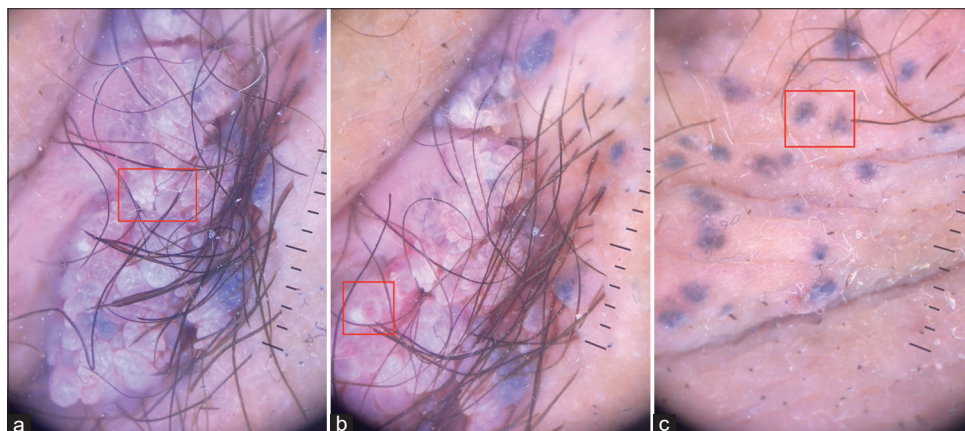
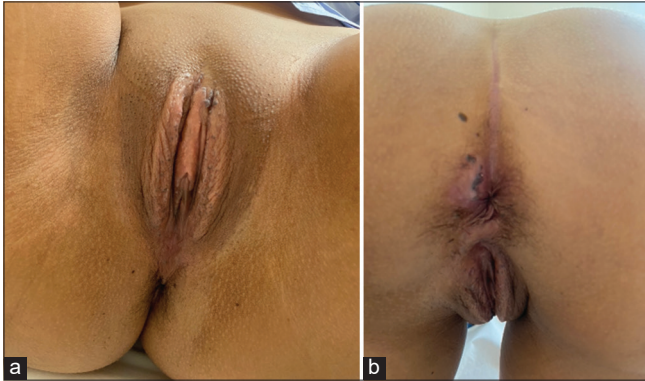


Figure 2: (a-c) Dermoscopy of the lesions: papillomatous structures in fingers and mosaics and dotted vessels with a whitish halo and pigmentation.

Table 1: Previous cases of Buschke–Löwenstein tumors treated with imiquimod reported in the referenced literature

Author	Age and Sex	Duration	Areas	Treatment and Results
Erkek et al. [6]	50 years Male	8 years	Scrotum, base of the penis	Oral acitretin 50 mg/day+5% imiquimod (3 times/week) Imiquimod stopped after four months. At six months, complete regression.
Suarez-Ibarrola et al. [7]	3 years Male	2 years, HIV-positive	Scrotum, base of the penis, foreskin, perineal area, and anal sphincter	Initially, 5% imiquimod (3 times/week) with no visible improvement. Electrosurgical resection. Then, IFN-alpha (2 million units/week)
Dinleyici et al. [8]	2 years Female	1 year and a half	Perianal	Topical cryotherapy: aggravated lesions. 5% imiquimod (3 times/week) for 12 weeks: complete elimination.

**Figure 3:** Disappearance of the lesions and a remission after treatment.

cell-mediated immune responses. B lymphocytes also proliferate to produce immunoglobulins. Via stimulated apoptosis, the drug inhibits associated pathological angiogenesis [5]. Therefore, it serves as a potent antiviral and antitumoral agent and provides a protective cytotoxic immune response against HPV.

5% imiquimod cream represents a novel treatment of BLT and is approved by the U.S. FDA [6], which has always been traditionally combined with other modalities; to electrosurgical resection and INF alpha in seropositive subjects [7], to oral acitretin [6], finally to cryotherapy; although, some authors have reported worsening after application, particularly, in perianal locations [8] (Table 1).

Although combination therapy remains the mainstay of treatment for Buschke–Löwenstein tumors, standalone treatment with imiquimod may be attempted in special cases. An Indian team successfully treated a case of a penile localization after sixteen weeks of imiquimod monotherapy resulting in the complete disappearance of the lesion and a relapse-free period of at least five years in a patient who was not a candidate for surgery and oral retinoids [4]. Combaud et al. successfully treated exophytic vulvar cauliflower warts after twelve weeks with 5% imiquimod alone with a marked regression in the lesions accompanied by an

improvement in symptoms with no recurrence reported during a follow-up period of three years [9].

In our case, monotherapy with imiquimod was sufficient after a period of sixteen weeks, which saved the patient from an irritant treatment with trichloroacetic acid and potentially damaging surgical means.

A meta-analysis comparing the different local therapeutic modalities in the treatment of genital warts including 6371 patients demonstrated a superior efficacy of 5% podophyllotoxin compared to 5% imiquimod for the elimination of lesions (odds ratio: 194) yet was associated with a higher overall adverse event rate. 15% sinecatechins ointment (odds ratio: 21) was significantly less effective than 5% imiquimod cream in clearing lesions. Idoxuridine, polyhexamethylene biguanide, and cidofovir have shown therapeutic efficacy comparable to conventional therapies [10].

CONCLUSION

Condyloma acuminata is more frequent, more extensive, and often multifocal and resistant to conventional treatment in HIV-positive individuals. They represent a significant risk of dysplastic lesions and malignant transformation, especially in cases of advanced immunosuppression. We emphasize, through this observation, the importance of a well-conducted medical treatment in monotherapy with imiquimod in remission. Our result was similar to some cases reported in the literature.

Ethics Statement

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

Statement of Informed Consent

Informed consent for participation in this study was obtained from the patient.

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Source of Support: Nil, Conflict of Interest: None declared.