Oral isotretinoin as first-line systemic therapy in a case of extensive genital warts

M. Sivasankari, M. Subramania Adityan[1]
Department of Dermatology, Military Hospital Jodhpur, Jodhpur, Rajasthan, [1]Aditya Skin and Hair Laser Center, Madurai, Tamil Nadu, India

Address for correspondence:
Dr. M. Sivasankari, Department of Dermatology, Military Hospital Jodhpur, Jodhpur - 342 001, Rajasthan, India.
E-mail: dr.m.sivasankari@gmail.com

Abstract

Genital warts caused by human papillomavirus are one of the most common sexually transmitted diseases seen in the outpatient department. Treatment modalities of genital warts vary depending on the size, site, extent of the lesions, and patient compliance. Here, we report a case of extensive genital warts managed with oral retinoids which resulted in complete clearance.

Key words: Extensive genital warts, isotretinoin, mainstay of treatment

Introduction

Genital warts are caused by human papillomavirus (HPV). The modality of treatment[1] may differ from patient to patient based on various factors such as site, size, extent, patient's knowledge, comfort, and compliance. There are various modalities of treatment available for genital warts varying from the conventional topical salicylic acid, cryotherapy, imiquimod, 5-fluorouracil, chemical cauterization (using trichloroacetic acid and podophyllin), and surgical therapies such as electrofulguration to the systemic cimetidine, zinc, cidofovir, and retinoids. The systemic drugs are used as an adjunct therapy to the topical or surgical therapies in the management of genital warts as they lack direct anti-HPV activity. We have brought out a case of extensive genital warts which resolved well with oral retinoids as the mainstay of treatment.

Case Report

A 38-year-old male presented with complaints of multiple growths on his genitals and pubic region for the last 09 months. He had a history of similar tiny lesions on the penis 03 months before the onset of these lesions, for which he was managed with chemical cautery. He being a divorcee has been having extramarital unprotected penovaginal sexual exposure with a known female over the last 1½ years. Dermatological examination revealed multiple gray-colored discrete verrucous papules on the pubic area. Nontender dark gray-to-black-colored coalescing verrucous plaques [Figure 1a] covering most of the anterior surface of the scrotum were seen and the same extended to the posterior and right lateral surfaces also. There was no bleeding on touch. Genital and oral mucosae were normal. Biopsy was taken from the edge of the lesion which showed acanthosis and koilocytes in the epidermis [Figure 2]. Based on the histopathological and clinical findings, a diagnosis of genital warts was made. Investigations including ELISA for HIV antibodies and Venereal Disease Research Labarotory (VDRL) were negative. The lesions on the scrotum were so extensive that any debulking surgical procedure would leave behind the raw area which would further delay the healing on the loose scrotal skin. Moreover, the patient was also not willing for cryotherapy and radiofrequency ablation. Hence, after baseline biochemical investigations, the patient was started on oral isotretinoin (20 mg/day) in the dosage of 0.5 mg/kg/day. He was advised regarding contraception. The lesions started to respond after 02 weeks of therapy and gradually improved. After 16 weeks of isotretinoin, all the lesions cleared well [Figure 1b], following which his dosage has been tapered to 10 mg/day and continued in the same dosage for another 16 weeks. No major adverse effects other than occasional cheilitis were noted. His lipid profile and liver function tests were monitored at regular intervals. The patient is under follow-up. There is no recurrence of lesions so far.

Discussion

Genital wart is one of the most common sexually transmitted infections caused mainly by HPV 6 and 11. The conventional modes of treatment[1] of warts give good and complete clearance, but they are frequently associated with irritation, pain at the site of topical application, ulceration, scarring, and recurrence. In case

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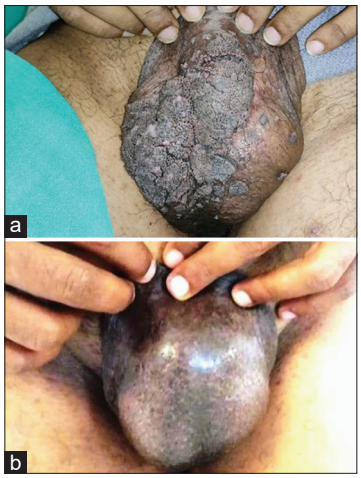

Figure 1: (a) Verrucous plaques seen on the scrotum. (b) Posttreatment (after 16 weeks of isotretinoin)

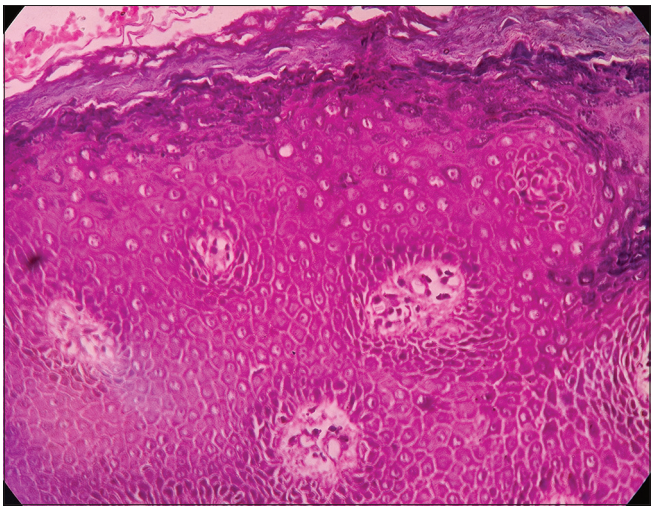

Figure 2: HPE ×40 showing koilocytes in the upper epidermis

of recurrent/recalcitrant lesions, usually, a combination of topical and systemic therapy is opted. Although none of the systemic therapies have direct and specific anti-A HPV effect, they have an added advantage of reducing the viral replication, unlike the topical modalities which remove the virus at the site of lesion. Drugs such as cimetidine, oral zinc, oral retinoids, interferon alpha, and cidofovir have been tried in the treatment of warts. The retinoids have biological effects such as the regulation of keratinocyte proliferation and differentiation, thereby decreasing the epidermal hyperplasia. In addition to its inherent immunomodulatory action, it is proposed to downregulate the viral transcription[2] and induce apoptosis of the virus-infected cells. Studies have also found that the HPV-DNA level is inversely proportional to the concentration of retinoids in the infected cells, and they also prevent cancer formation[3] in them. Systemic retinoids, mainly acitretin[4] and isotretinoin,[5,6] have shown complete resolution of recalcitrant and recurring warts in nongenital areas (common warts, verruca plana, and facial warts). Acitretin has also been used successfully in giant condyloma acuminate in combination with immunotherapy[7] or imiquimod and surgical debulking.[8] However, not many studies have reported the use of acitretin monotherapy in the management of genital warts. Isotretinoin has been used as monotherapy or adjuvant therapy with topical podophyllin in the treatment of recurrent/recalcitrant genital warts in immunocompetent[9] and in combination with surgical debulking[10] in immunocompromised with a good clearance of lesions. Tsambaos *et al*.[11] studied the efficacy of isotretinoin in the treatment of genital warts which were refractory to some form of conventional treatment. They found that 39.6% of their patients had complete resolution, while 47.1% did not respond to the treatment. Studies[12] have revealed statistically significant remission rates and lesser recurrence with the combination of systemic interferon-α2b with oral isotretinoin than isotretinoin monotherapy alone in the treatment of genital warts. A randomized controlled trial showed that low-dose oral isotretinoin had greater efficacy and lesser recurrence rates[13] when used in recalcitrant cases of condyloma acuminata of the cervix.

There are relatively few studies on the use of isotretinoin as the first-line treatment of genital warts. In our case, we opted for systemic retinoid monotherapy (oral isotretinoin in the dose of 0.5 mg/kg) as the mainstay of treatment in view of the extensive spread of the lesion on the scrotum and as the patient was not willing for cryotherapy or radiofrequency cautery due to the fear of ulceration and scarring. The lesions cleared very well with the prescribed dose. However, the patient is being followed-up for any recurrence. Although studies show equal efficacy with both acitretin and isotretinoin as adjuvant therapy, isotretinoin was preferred in our case as it has added advantages of cost-effectiveness, shorter half-life, drug holidays, faster clearance, and thereby planning of family. This case highlights the outcome of using isotretinoin monotherapy as the mainstay of treatment in a first episode of extensive genital warts without using other traditional methods.

Conclusion

This case has been reported to consider the use of oral isotretinoin in the mainstay of treatment for extensive genital warts due to the ease of administration. However, as conclusions cannot be made with a single report, further researches need to be done to study the efficacy and recurrence rate with oral isotretinoin as the mainstay of treatment in the first go. Moreover, large-scale multicentric studies are needed as warts are known to resolve spontaneously.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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