LEVAMISOLE AND PODOPHYLLIN FOR THE TREATMENT OF CONDYLOMATA ACUMINATA

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Levamisole, a wide spectrum antihelminthic has been compared for its curative effect on condylomata acuminata with podophyllin when given alone or combined with podophyllin topically. A cure rate of 83.6% was obtained with podophyllin alone after an average of 7.6 applications. With combined therapy, comparable good results were obtained i.e. a cure rate of 79.0% after 7.9 applications. Levamisole was found to be completely disappointing and had no effect on warts either given alone or in combination with podophyllin. No serious local or systemic side effects were noted with podophyllin and levamisole. Perianal and intrameatal warts were found to be relatively resistant to therapy.

Key words : Levamisole, Podophyllin, Condylomata acuminata.

In view of the recent concern for the malignant potential of condylomata acuminata and increasing incidence, it is desirable to adopt the best possible mode of therapy for its cure. Though genital warts may spontaneously regress,[1-3] it is impossible to watch and wish for their disappearance. Specific treatment includes cauterisation with podophyllin.[4] Caustics like phenol and trichloroacetic acid are recommended for keratotic warts.[5,6] Electrodessication, cryotherapy, lasers, external radiation therapy, interferon, surgical excision and autologous vaccine are a few of the modes from a multitude of modalities tried with varying degrees of success. Experiments have shown some efficacy in the use of 5-fluorouracil,[7] and 5% acyclovir cream but these drugs must be used with caution and reservations. In the experimentally sensitized patients dinitrochlorobenzene (DNCB) causes regression of warts. But DNCB has not been adequately evaluated in controlled clinical studies.[8] Other immunomodulators with reported success are levamisole,[9-11] cimetidine,[12] BCG[13] and inosine pranobex.[14] Many other preparations have been advocated including colchicine,[15] thiotepa,[16] and intralesional bleomycin.[17] Despite all the modes of treatment mentioned, treatment of warts presents a particular challenge. The present study was conducted to evaluate the combination of an immunomodulator levamisole orally alone or combined with podophyllin, compared with podophyllin alone applied locally.

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Materials and Methods

Seventy eight adult male patients with age range of 18-43 years having condylomata acuminata were selected. Severity of the disease was classified as minimal (up to 5 lesions), and moderate (6-10 lesions) depending upon the number of lesions. Patients with more than 10 lesions irrespective of the size were not included in the study. Patients on any immunosuppressive therapy or having an immunological disease were excluded. The patients were classified into 3 groups : Group I (49 patients) were given application of podophyllin 25% in alcohol and tincture benzoin once a week till total clearance. Patients were advised to wash the podophyllin 2 hours after the application followed by application of an emollient. Podophyllin was stored in air-tight vials to avoid concentration of the resin due to evaporation of the organic solvents. Fresh solutions were made every 6 weeks. Group II (10 patients) were administered 150 mg levamisole orally twice a week for 6 weeks.

If there was no improvement the patient was put on another mode of therapy. It was considered unethical to continue the therapy beyond 6 weeks if there was no response. Group III (19 patients) were given combined therapy with levamisole (150 mg twice a week orally for 6 weeks) and podophyllin as in group I. We treated all patients in Group I and III till the time of total clearance or 16 weeks whichever was earlier.

All patients who had responded were followed-up for a further period of 3 months for any recurrence.

Results

In group I, 43 (83.6%) patients cleared with podophyllin application in an average time of 7.6±2.0 weeks. Eight (16.4%) patients did not show any signs of regression at the end of 16 weeks. Two (4.9%) patients relapsed after 6 weeks of apparent clinical cure. All the patients who did not respond had warts in the perianal and intrameatal areas.

In group II, none of the patients showed any improvement after 6 weeks of therapy.

In group III, 15 (79.0%) patients cleared in an average of 7.9±1.8 weeks. Four (21.0%) patients did not respond. One patient relapsed after 8 weeks of clearance.

All the patients tolerated podophyllin and levamisole well. No serious local or systemic side effects were noted. In 3 patients who developed mild to moderate degree of irritation accompanied by oedema of prepucial skin, the next treatment was witheld till the time of healing and a short course of systemic corticosteroids was given in addition to local hygiene.

Patients treated with podophyllin application alone showed comparable results with the group given combined therapy and there was no difference between the time taken and the percentage of responders ($p>0.05$).

Comments

Podophyllin was first introduced by Kaplan[18] in the management of condylomata acuminata. Culp and Kaplan[4] reported a cure rate of 81% (200 patients treated) after one application. Excellent cure rates were claimed in subsequent studies. Cohen[19] however, found that penile warts disappeared only in one third of patients treated once. Subsequent studies[20] have also not indicated very high success rate. Simmons[20] however obtained disappointing results with podophyllin. He reported a cure rate of only 22%. So the results with podophyllin therapy are quite variable with a cure rate of 20-80%.[21,22]

Levamisole a wide spectrum antihelminthic drug increases cellular immunity in vitro and in vivo. It has been found to be useful in the treatment of warts particularly when the lesions are numerous, are present for a long time, are resistant to conventional forms of therapy and when one or more parameters of cell mediated immunity are shown to be defective.[23] Helin and Bergh[9] reported 90% cure rates with levamisole, Moncada and Rodriguez[11] and Bhargava et al,[10] 72.7% and 33.9% respectively. Schon and Helin[24] in their double-blind study found levamisole to be no more effective than placebo.

In our study a cure rate of 83.6% was obtained with podophyllin alone after an average of 7.6 applications. The results are in agreement with the results obtained by Weston[25] and Sait and Garg[22] who obtained 90% and 93.3% cure rates respectively.

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