

TREATMENT OF WARTS WITH SALICYLIC ACID AND LACTIC ACID IN FLEXIBLE COLLODION WART PAINT

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One hundred patients with warts (*Verruca vulgaris* of hands-33; feet-16, hands and feet 10; palmar warts-17 and plantar warts-24) were treated with salicylic acid (16.5%) and lactic acid (16.5%) in flexible collodion wart (SAL) paint. The wart paint was applied twice a week for 3 months.

Good response was seen in 82.1% of warts on hands, 46.7% of palmar warts, 54.5% of warts on feet, 84.2% of plantar warts and 57.1% of warts on hands and feet. Overall success rate was 70%. Eighty percent patients completed the study. No adverse effects were observed. During 6 months post treatment follow up recurrence of warts occurred in 11.7% of patients.

Introduction

Successful treatment of warts is an art.¹ Though several modalities are used, none is universally effective. Although majority of cases with warts are treated by general practitioners,² a recent survey found that 21% of referrals to a dermatology department were for warts, and the treatment and follow up of these patients constituted 19% of the work load.³ Various sophisticated modalities viz., cryotherapy, LASER, autovaccine and interferons are now available for the treatment of warts. However, salicylic and lactic acid (SAL) wart paint still remains the treatment of first choice for common warts of hands and feet.¹ But, daily application schedule of this wart paint increases the work load of a busy dermatology out patient department. The patients are, therefore, advised to apply SAL paint themselves which might be responsible for its reported reduced efficacy. We, therefore, undertook a therapeutic trial with SAL paint applied twice a week by one of us in 100 patients with warts.

Materials and Methods

Over 1.5 year period, between June 1989 to December 1990, 100 patients with *verruca vulgaris* attending the dermatology outpatient department were included in the study. Subjects of all ages and either sex were included. Patients with plane warts or lesions over the face were not included.

In every patient in addition to demographic details, a clinical examination with special emphasis on type, number, location and size of warts was carried out. Previously tried treatment modality was also recorded.

They were given treatment twice a week for a maximum period of 3 months and stopped early if the lesions disappeared. During each visit, wart paint containing 16.5% salicylic acid and 16.5% lactic acid in flexible collodion (SAL) was applied by one of us after light paring of the lesions. During subsequent visits, the size and number of lesions were noted.

At the end of 3 months (about 25 sittings) or before, subjects in whom there was no visible or palpable (palmar and plantar) wart were labelled as "cured". Those in whom there was 50% reduction in number and size were labelled as "improved" and the rest as

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'failures'. Treatment with SAL paint was continued in "improved" patients. However, for analysis they have been included as "improved". Those who did not complete a minimum of 20 sittings were excluded from the study. "Cured" subjects were thereafter called at monthly interval for 6 months for any evidence of relapse. Of the 100 patients, 80 completed 3 months treatment protocol, while 60 were available for a 6 months post-treatment follow-up.

Results

Of 100 patients, 56 were males and 44 females. Their ages varied from 13-64 years (mean 26.5 years). Duration of warts ranged between 1 to 16 months (mean 4.6 months), various treatments received by the patients were cautery with trichloroacetic acid, electrofulguration and cryotherapy. Sixty patients (60%) were fresh and untreated.

Number of warts per subject varied from 1 to 9 (mean 3.1) and size varied from 1 to 10 mm (mean 4.8 mm). The location and sizes of warts have been shown in Table 1. None of the patients had mosaic plantar warts. Eighty patients (80%) completed at least 20 sittings. Their response to treatment is shown in Table 2. The significance of response was analysed by Chi square test. Patients with plantar warts reported significant reduction in local pain/discomfort also with treatment.

Table I. Details of location, size and number of warts

Type and site of warts	No. of Patients	Warts			
		Size <5mm		5mm or more	
		No. <5	≥5	<5	≥5
I. Verruca vulgaris of hands (dorsum)	33	23	4	18	4
II. Palmar warts	17	11	1	10	3
III. Verruca vulgaris of feet (dorsum)	16	13	3	4	3
IV. Plantar warts	24	16	4	16	2
V. Verruca vulgaris of hands and feet	10	7	2	3	3

During 6 month post treatment follow-up, 7 to 60 (11.7%) patients who were initially labelled as "cured" relapsed (2-Verruca vulgaris of hands, 1-palmar warts, 4-plantar warts).

Discussion

Besides SAL paint, various other modalities used for treating common warts, palmar and plantar warts are, caustics e.g. monochloro or trichloroacetic acid, glutaraldehyde, silver nitrate, podophyllin, contact sensitization with DNCB or diphencyprone, formalin soak B, topical 5-fluorouracil (5 TU), topical and oral retinoids, intralesional bleomycin, electrocautery and curettage, surgical excision, cryotherapy, photodynamic inactivation, radiotherapy,

Table II. Response of various types of warts to treatment.

Type and site of warts	Completing treatment	Number of patients			
		Cured	Improved	Total	Percentage
I. Verruca vulgaris of hands (dorsum)	28	15	8	23	82.1
II. Palmar warts	15	3	4	7	46.7
III. Verruca vulgaris of feet (dorsum)	11	3	3	6	54.5
IV. Plantar warts	19	7	9	16	84.2
V. Verruca vulgaris of dorsa of hands and feet	7	3	1	4	57.1

autovaccines and hypnosis.^{2,4} Multiplicity of treatment modalities suggest that no single treatment is uniformly successful. Recently inosine pranobex, an immunomodulating drug was used albeit not very successfully to treat common warts and palmar warts resistant to conventional treatment.⁵

In one study SAL paint applied daily for 3 months achieved cure in 67% with common warts of hands, 84% with simple plantar warts and 45% having mosaic plantar warts comparing favourable with other modalities including liquid nitrogen cryotherapy.⁶ The major drawback of the "daily application schedule" carried out by the physician on the patient himself is poor compliance. Which results in reduced efficacy.⁵

In the present series, with twice a week application of SAL paint a more favourable response was seen on warts located on hands and feet and less impressive response in palmar and plantar warts. This degree of good response could be attributed to our own involvement in paring and application of SAL paint and regularity of patients as paring is known to increase the cure rate of plantar wart.⁵ It was routinely undertaken in our patients.

Maximum improvement / cure was seen in warts of less than 5 mm size and of short duration. This is in corroboration with observations by others.^{5,6} However, there was no correlation between the response to treatment and age, sex of patients and number of warts. However, cure rates were reported to be better in younger patients and in those with less number of warts.⁶ Treatment period of 3 months is the most optimal because afterwards the compliance comes down and consequentially the cure rates.⁵

In the present study, overall treatment failure rate was 30%, which is similar to the

figures of Bunney et al.⁶ Most of the warts resistant to other modalities of therapy were found to be resistant to SAL paint also.⁵ The recurrence rate of warts is known to be high.⁶ It was estimated to be 5% for common warts, occurring within 3-4 months in one study.⁷ In our series 11.7% of "cured" patients showed recurrence within 6 months. Interestingly all the relapsed lesions were at the site of warts with 5 mm or more in diameter. There is a possibility of an incomplete cure as it is the most important cause of recurrence.⁶

Defaulter rate is a major problem with any study on wart treatment. It was found to be 19% in one series.⁵ In the present study it was 20%.

The present communication highlights the fact that SAL paint is still the convenient and best noninvasive modality for common warts of hands and feet, palmar and plantar warts. Paring does seem to enhance the efficacy of therapy. It is possible to improve the response rates if the patients can be educated to apply the SAL paint in between the visits also.

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