

Treatment and Outcome of Warts

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The viral wart is a common reason for patients to see physicians in primary care. While little serious morbidity is associated with this condition, warts represent a cosmetic and otherwise annoying problem for many patients. The natural history of warts has been studied in several settings, and data suggest that at least two thirds of warty lesions will spontaneously regress within two years.¹ For those lesions that do not regress or are believed to require treatment, a variety of therapies has been suggested. Primary care texts tend to recommend liquid nitrogen as a primary treatment for warts on the hand and salicylic acid for plantar warts.^{2,3} Comparative trials summarized by Bunney and colleagues⁴ suggest that these recommendations are reasonable, with expected cure rate in the range of 70 percent for hand warts and 80 percent for plantar lesions.

This study was undertaken to learn more about what treatments were currently being used and whether there were differing results for different therapies. The study was planned to be a prelude to a subsequent trial if the analysis showed substantial differences among therapies. Of interest also were the long-term results of management for a problem that was not perceived to engender follow-up.

METHODS

Patients seen in 1984 in the Family Practice Center (FPC) with a diagnosis of viral warts were eligible for the study. A listing of all such patients was obtained, and charts were reviewed to include those with a final diagnosis of viral warts in areas other than in the genital area. The diagnosis was accepted by the statement of the physician; few tissue samples were submitted

for pathologic confirmation. Information was abstracted about demographic characteristics, number and location of lesions, type of therapy, and number of visits. Patients were contacted by letter or telephone call between six and 12 months after treatment and asked about the status of their lesions and whether they had recurrences in other areas. Comparisons among groups were performed using chi-square analysis.

RESULTS

Seventy-six patients (of a total of 10,797 patients seen in 1984) were noted on record review to have viral warts in nongenital areas. Their ages ranged from 3 to 76 years, with a median of 25 years, younger than the overall FPC population. Forty (53 percent) were female and 32 (42 percent) were white. Fifty (66 percent) received one treatment for their lesions, while 26 (34 percent) made three or more visits for this problem. The patients were seen by second- and third-year residents and faculty at approximately equal rates. Twenty-six patients (34 percent) had lesions limited to the hands, 25 (33 percent) to the plantar surface of the foot, and the remainder had warts in other areas or multiple locations including the hands and feet. Sixty-one percent were isolated, single warts. Twenty-one percent of patients had two warts, and 18 percent had three or more lesions.

Liquid nitrogen alone was the treatment of choice in 34 (45 percent) patients. A combination of 16.7 percent salicylic acid and 16.7 percent lactic acid in flexible collodion (Duofilm) was the specific treatment in 23 (30 percent) patients. Approximately equal numbers of patients received these treatments in combination with other therapies or other measures alone including electrodesiccation and curettage.

Record review revealed data on the status of the warts after treatment in nine of the 76 patients (12 percent). The questionnaires and telephone calls produced information about the results of treatment in 70 or 92 percent of patients. Most of those who did not respond had moved; their characteristics appeared no different

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from those who provided follow-up information. Of the 70 respondents, 46 (66 percent) said they were completely healed. Nine (13 percent) said they were better, 11 (16 percent) were the same, and 4 (5 percent) were worse than before treatment. Fourteen (20 percent) reported the subsequent occurrence of new warts in untreated areas.

Relationships between personal characteristics and treatment and healing were assessed by categorizing lesions into healed and not healed among the 70 respondents. There were no differences in healing rates by age, sex, provider, number of treatments applied, or length of time between treatment and follow-up. Eighteen of 23 patients (78 percent) with only plantar warts had complete healing. Most patients received Duofilm for plantar lesions with a healing rate of 76 percent. The 23 patients with hand lesions only had a healing rate of 57 percent with little difference between treatment with liquid nitrogen or other modalities. Patients with warts in other or multiple locations had an overall healing rate of 63 percent with no substantial differences among therapies. It has been reported that multiple warts are more difficult to treat than solitary lesions. Among the 58 patients with one or two warts, there was an overall cure rate of 71 percent, while patients with three or more warts had a cure rate of 42 percent. This difference was statistically significant ($P = .05$), although the numbers in the latter group were small.

DISCUSSION

While there is no explicit treatment protocol in the FPC, the predominant therapies are consistent with recommendations cited in primary care texts.^{2,3} Liquid nitrogen was the major therapy for hand lesions, and home therapy with a combination of mild acids in colloidion was used primarily for plantar warts. The cure rate for hand lesions was lower than the 69 percent reported for applications of liquid nitrogen.⁴ This lower rate of cure may reflect that most FPC treat-

ments were single applications, while better results in the clinical trials were obtained with three treatments. Treatment of plantar warts was as successful as noted in previous reports.⁴ Although there was no control group to compare rates of spontaneous regression in a similar population, these healing rates at one year or less after therapy are greater than would be expected without treatment.¹ The continuing problem of warts, however, should be noted in that even in this small sample one in five patients developed new lesions during the follow-up period.

It is interesting to note that while the results of treatment of warts were generally satisfactory, these outcomes would not have been known by the treating clinicians; only about one in eight patients had any follow-up information in their records. The outcome data suggest that for ease of clinic operation and for teaching purposes, the standard use of acids in colloidion for foot lesions and liquid nitrogen for other warts may be appropriate. Although the study did not bear this out, possibly because of small numbers, it may be necessary to repeat applications of liquid nitrogen, as others have suggested.⁴

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References

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