

Study of Cryotherapy results in warts in patients referring to Dermatology Department of Sina Hospital, Iran

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ABSTRACT:

Introduction: Warts can occur at any age, but the disease prevalence is mostly between the ages of 12-16 years. 23% of warts remit within two months, 30% of warts remit within 3 months, 78-65 % remit within two years. People with a history of infection are most likely to get involved with the recurrent infection than those who had never been infected with warts. In this study, the results of cryotherapy treatment for refractory warts have examined. Refractory warts are which remain more than 2 years or with no response to routine karyolytic treatments. **Methods and Material:** This study is a descriptive and analytical study. It is done on patients referred to the Dermatology Department of the Sina Hospital in Tabriz witch diagnosed with refractory warts. This study was conducted on a group of 30 patients. The checklist has been prepared and was completed for each patient separately. **Results:** The patients response to treatment in patients who had warts in hands and foot in 11 were poor, in 8 were moderate and in 4 were good. The response in patients who had warts in oral and congenital area in 2 were poor, in 3 were moderate and in 1 were good also in patient with warts in head, face and neck the response was good. 19 patients (63.3%) of patients were female and 11 (36.7%) were male. The mean age of patients were 11.18 ± 26.97 years old (8-54 years). **Conclusion:** Our study shows that cryotherapy is less effective for treating refractory warts and the most frequent side effects between the others. Improvement in plantar and foot warts was almost high that may because of almost high number of individuals referring with these anatomic locations warts.

Keywords: Cryotherapy; Warts; Skin diseases

INTRODUCTION

The human papilloma virus-induced tumors, warts, which can be polymorphic lesion of skin and mucosal areas such as hands, feet, face, trunk, genital mucosa, mouth, larynx and also involve the cervix. They are actually benign proliferation of skin and mucous membrane [1,2]. This is a fairly common condition and more than 100 different species of this viruses has had been known.

Warts can occur at any age, but the disease prevalence is mostly between the ages of 12-16 years [3]. The most common types of warts is "common warts" and the

most common sites are the hands [3], 23% of warts remit within two months, 30% of warts remit within 3 months, 78-65 % remit within two years. people with a history of infection are most likely to get involved with the recurrent infection than those who had never been infected with warts [4].

Since different types of warts and various parts of the skin and mucous membranes are involved as well, depending on the number of lesions in different parts of the body, treatments for warts is different. It should be emphasized that none of the methods of treatment has definite response, and recurrence of warts is common [5].

How to cite this article: Mehdi A, Effat K, Sima M, Sina N, Esmaeil EK, Abolfazl E. Study of Cryotherapy results in warts in patients referring to Dermatology Department of Sina Hospital, Iran. Our Dermatol Online. 2015;6(3):292-295.

Submission: 05.01.2015; **Acceptance:** 10.06.2015

DOI:10.7241/ourd.20153.78

Mostly warts treatment methods are aggressive and effective anti viral (HPV) treatment is not available and treatments which are effective on lesions that can be viewed or induce immune system stress [6] several therapies are used to treat warts, but resistance to many of them have been observed. In this study, the results of cryotherapy treatment for refractory warts have examined. Refractory warts are which remain more than 2 years or with no response to routine karyolitic treatments.

METHODS AND MATERIAL

This study is a descriptive and analytical study. It is done on patients referred to the Dermatology Department of the Sina Hospital in Tabriz witch diagnosed with refractory warts. This study was conducted on a group of 30 patients. The checklist has been prepared and was completed for each patient separately.

Location of study was Dermatology Clinic of Sina Hospital affiliated with the University of medical sciences of Tabriz. The study lasted 12 months. Collecting data was done in 2013-2014, the evaluation and analysis of the data was done in 2014.

Age and gender, number and extent of lesions, duration of wart were recorded on the questionnaire for each patient. Also, for more accuracy the wart lesions were photographed before treatment and all these steps after completion of therapy in each patient was assessed again.

For statistical analysis descriptive statistics (frequency, percentage, mean \pm SD) were used and also Spss 17th statistical software was tested with the latest version available. Individuals in 6 session once in a two week were under cryotrhyapy treatment and they were followed up as point of side effects and recurrence of warts for 6 months.

Ethics

This study was performed on human subjects; thus, all patients were aware of the presence of the study and they were fully informed about the drug and its side-effects.

RESULTS

19 patients (63.3%) of patients were female and 11 (36.7%) were male. The mean age of patients were

11.18 \pm 26.97 years old (8-54 years). Concerned with The distribution of the marital status of patients 15 person equals 50% were single and 15 person equals 50% were married. The frequency distribution of the number of warts was 11.07 \pm 9.55. patients had warts average 17.47 \pm 14.66 months, minimum time getting refractory warts from initial diagnose was 1 months and maximum was 120 months.

The distribution of the anatomic location of the warts in 23 person warts were observed in hands and foot in 6 patient were observed in Oral and genital are and in 1 were observed in servicofacial.

Frequency distribution of treatment effects 1 with no side effects were observed 8 with pain, 1 with blister, 2 with Erythema and swelling, 2 with Erythema and pain, 10 with Pain and blisters and 6 with Hyperpigmentation, scarring, pain and blistering were observed. Frequency of healing in treatment session are as written in below: 1.03 \pm 0.18 patients showed improvement in first session, 1.07 \pm 0.28 patients showed improvement in second session, 1.17 \pm 0.48 patients showed improvement in third session, 1.33 \pm 0.60 patients showed improvement in forth session, 1.5 \pm 0.73 patients showed improvement in fifth session And 1.77 \pm 0.77 patients showed improvement in sixth session. the recurrence of refractory warts in this study after 6 months were reported in 8 patients (26.6%).

The patients response to treatment in patients who had warts in hands and foot in 11 were poor, in 8 were moderate and in 4 were good.

The response in patients who had warts in oral and congenital area in 2 were poor, in 3 were moderate and in 1 were good also in patient with warts in head, face and neck the response was good.

DISCUSSION

Warts is a common clinical problem for patients and dermatologists and an effective treatment without pain and scarring, especially in refractory cases is required [5]. Cryotherapy has traditionally been used for plantar warts. However, clinical trials report low rates of cure and it results in significant pain and blistering, reducing mobility for up to several weeks. A meta-analysis of trials of cryotherapy (with liquid nitrogen or any other substance which induces cold damage to warts, e.g. dimethyl ether and propane [DMEP]) [6]

showed that freezing of cutaneous warts located on the hands or feet was with less effective and mostly with side effects than others. Studies of combination treatment of cryotherapy with additional topical salicylic acid application for refractory do not support the idea that this treatment is better than salicylic acid alone [7,8]. Cryotherapy for plantar warts is therefore a non-evidence based intervention, associated with significant morbidity. N.B. Cryotherapy is less effective for treating plantar warts due to the thickness of the stratum corneum in this area. It may be more effective for treating warts in other body sites, e.g. anogenital warts [9].

In our study 63.3% of patients were female and 36.7% were male. The mean age of patients were 11.18 ± 26.97 years old (8-54 years). The frequency distribution of the number of warts was 11.07 ± 9.55 .

The treated area is likely to blister within a few hours. Sometimes the blister is clear and sometimes it is red or purple because of bleeding (this is harmless) [10]. Treatment near the eye may result in a puffy eyelid, especially the following morning, but the swelling settles within a few days [11]. Within a few days a scab forms and the blister gradually dries up. Concerned with Frequency distribution of treatment effects 1 with no side effects were observed 8 with pain, 1 with blister, 2 with Erythema and swelling, 2 with Erythema and pain, 10 with Pain and blisters and 6 with Hyperpigmentation, scarring, pain and blistering were observed. So in our study among 30 individuals only we had one with no side effects (3.3%) and 29 patients (96.7%) showed different side effects which was convey pain, blister, scar, the most frequent side effects were pain and blister.

The patients response to treatment in patients who had warts in hands and foot in 11 were poor, in 8 were moderate and in 4 were good. The response in patients who had warts in oral and congenital area in 2 were poor, in 3 were moderate and in 1 were good also in patient with warts in servicofacial the response was good. Thus totally in this study among 30 individuals 13 cases (43.3%) had a poor response, 11 cases (36.6%) had a moderate response and finally 6 cases had a good response (20%), these results obtained after 6 session of cryotherapy treatment.

Cryotherapy in refractory warts is a less effective which include different side effects on patients. And it has aggressive procedures. In comparison of anatomical

locations of refractory warts, the servicofacial had a good response to cryotherapy treatments, due a thick hypoderm of plantar and foot wart had e resistance in cryotherapy which causes more side effects and due to this it takes more time of treatment and more treatment sessions.

CONCLUSION

Our study shows that cryotherapy is less effective for treating refractory warts and the most frequent side effects between the others. Improvement in plantar and foot warts was almost high that may because of almost high number of individuals referring with these anatomic locations warts.

Due this descriptive and analytical study, is suggested a clinical trial study to compare different methods of treatments for refractory warts.

Statement of Human and Animal Rights

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008.

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