

THE COMPARISON STUDY OF 5 FLUOROURACIL VS. CRYOTHERAPY IN THE TREATMENT OF THE BACKHAND RESISTANT COMMON WART

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Abstract

Introduction: Wart is a common disease which is caused by a group of viruses called Human Papilloma Virus. The most prevalent type of wart is common wart and the most prevalent site of involvement is hands. Complete recovery, no recurrency and effectiveness in all patients are not obtained by any of therapeutic methods, so in this study we decided to compare therapeutic effects of 5 Fluorouracil (FU) with cryotherapy in treatment of common warts of backhand.

Material and Methods: In this study, in a one year period from March 2012 to March 2013, 60 patients that referred to dermatology clinic of Sina hospital included the study with the diagnosis of backhand wart. Patients were divided into two groups of treatment, one treated with cryotherapy (30 patients) and one treated with 5 FU (30 patients). Age and gender of patients, number of lesions and duration of involvement were documented. Treatment by topical 5 FU was implemented for 4 weeks, twice a day for 4 hours each course. Second group was treated by cryotherapy (liquid nitrogen spray, two sessions with a two-week interval between sessions). Their response to treatment was evaluated as good, moderate and weak.

Results: There was no difference in age, gender and mean of duration of involvement and number of lesions between two groups. Response to treatment was considerably better in 5 FU group ($p=0.02$). Also rate of relapse and complications were lower in 5 FU group of treatment, with a statistically significant difference compared to the cryotherapy group ($P<0.001$). In separate evaluation of complications only scar formation was equal in two groups and pain and bullae formation were lower in 5 FU group with a statistically significant difference ($P<0.001$ both).

Conclusions: According to limited studies in this field, results of this study could be the base of more comprehensive studies in evaluating the efficacy of 5 FU in treatment of common warts. Appropriate therapeutic response in addition to lower rates of relapse and complications by 5 FU treatments can make a major change and lower the psychosocial burden of this disease dramatically.

Key words: Fluorouracil; Cryotherapy; Resistant warts of backhand

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Introduction

Warts are fleshy tumors/lumps that grow on the hands and feet, but it may grow on all parts of the body. They are indeed benign proliferation of skin and mucous [1-5]. This disease is relatively common and it caused by a group of viruses called "human papilloma virus", that can grow on the skin, the inner surface of the mouth and genital and anal areas [6,7].

According to importance of performance, availability and cost of selected method in treating patients with "hand warts", and also the lack of relevant studies about this case (8,9), we decided

to compare "5-fluorouracil therapy" with "cryotherapy" in treatment of common warts on hands, if there is one superior to the other methods, we use it as the preferred treatment method.

Materials and Methods

In this study during the one-year period (1391-1392), 60 patients with "hand warts" referred to the dermatology clinic in Sina Hospital, were selected for the study. Patients were treated in two categories (30 of them with cryotherapy and 30 with 5-fluorouracil).

Age and sex, number of warts, and duration of illness were registered in patient's history. Treatment with local 5-fluorouracil was carried out for 4 hours at 2 times / day for 4 weeks.

The patients were taught how to use the cream and then, they use the cream themselves. The second group treated by cryotherapy with liquid nitrogen and using spray cryotherapy with a distance of 1-2 cm from the warts in the term of 20-30 seconds depending on the size of warts, to the extent that white halo is formed around the wart.

Results

In our study there were 28 (46.7%) female individuals and also 32 (53.3%) male participants. Average age of all participants was 17.61 ± 8.35 years. The youngest was 6 and the oldest one was 48 years old. Average number of warts were 4.73 ± 2.73 (3-20) also duration time to warts were 14.95 ± 9.55 . response to medication in 26 individuals were good (43.3%) in 22 cases were moderate (36.7%) and in 12 cases were low (20%). Response to medication was analyzed between two groups and results proved that 5-fu had a significant different to cryotherapy group ($p=0.02$). We had compare also side effects of two methods as a due it shows that side effect in 5-fu group were significantly lower than cryotherapy group ($p<0.001$). In 19 (63.3%) cases in cryotherapy group pain was reported as side effects but none of participants in 5-fu show any pain. which was significantly difference between two groups. Scorch reported in 22 (37.3%) in cryotherapy and 0 in 5-Fu also in this point of view there were a significant difference between two groups.

Discussion

This study is a randomized clinical trial that carried out with the aim of comparing the two methods, "using local 5-FU" and "Cryotherapy" in response to the treatment, medical complications and recurrence of common hand warts. In this illness, 60 patients were divided into two therapeutic groups, and were evaluated in a prospective study.

In our survey, overall, 53/3% of patients were male. (63/3% in 5-FU group and 43/3% in cryotherapy group, $P=0/72$) and the mean age of patients in both groups were respectively $19/2 \pm 10/02$ and $15/96 \pm 5/94$ ($P=0/13$). The mean duration of illness in 5-FU group, was slightly significant ($16/47 \pm 9/42$ in comparison to $13/48 \pm 3/48$, $P=0/27$). Average number of warts was similar in the two groups. ($4/53 \pm 3/12$ in 5-FU group in comparison to $4/93 \pm 2/3$ in Cryotherapy group $P=0/57$)

Unlike previous studies [10,11], most of our patients were male and mean age of patients was lower compared to previous results. This issue can be caused from epidemiological differences of disease in various locations. The mean duration of illness in Luk et al Survey was about 17-19 months and similar to our study [7]. This value in Valikhani et al study was approximately 30 months and much higher than in our study [11]. Unlike general impression that skin wart is a simple disease with an outpatient and fast treatment, our survey along with other studies shows that many patients are already infected and are trying to treat it. In addition to this issue, such high figures associated with disease duration, notes the importance of effective treatment with low recurrence. Average number of lesions in our study was lower than Valikhani and Sayad Rezayi's [11]

In our study, the therapeutic response of 5-FU group was much

better than Cryotherapy (60% positive response in 5-FU group in comparison to 26/7% positive response in Cryotherapy group, $P=0/02$). Disease recurrence and also complications was lower in 5-FU group, and the difference of these cases with Cryotherapy group was statistically meaningful.

In the separately assessment of treatment effects, having scars was the only effect in 5-FU group that was equal with Cryotherapy group. Having pain (0 in comparison 63/3%) and blisters (0 in comparison 37/3%) was rarely seen in this group, this case has also a significant difference with Cryotherapy group. And the cure rate was 30 and 42/5% ($P=0/02$)

Also side effects and pain were seen in 27, 19 patient receiving both Cryotherapy and F-U, and 14, 11 patient receiving Cryotherapy and placebo. These differences were not statistically significant. In Valikhani, survey [11], 93/3% of patients in the group treated with Cryotherapy had complete recovery, whereas the complete recovery was seen 66/7% of patients treated with 5-FU ($P=0/02$)

However in both these studies, clinical improvement was higher in Cryotherapy group, they recommended using 5-FU for certain categories of patients.

Again in Sayad Rezayi, study, however the outcome was more favorable in Cryotherapy group but the difference is not too much (52% positive response in 5-FU group and 60% in Cryotherapy group), disease recurrence in 5-FU group was lower like our study (8% in comparison to 18%). Unlike our survey, none of the patients in this study had been scars, and the amount of pain and blisters in the Cryotherapy group of patients was very high, while in 5-FU group were not reported. It seems that according to the results of studies conducted by Hursthouse et al [12] and Lee et al [13], we can consider 5-FU as an appropriate treatment for hand warts.

Conclusion

This study prove the usage of 5-Fu in warts treatment which were significantly low in side effects and reliable in treatment, it would one of basic studies to investigate more about 5-Fu.

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