Evaluation of Safety and Efficacy of Intralesional Vitamin D3 in cutaneous common wart

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(بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ)

(يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنكُمْ وَالَّذِينَ

أُوتُوا الْعِلْمَ دَرَجَاتٍ)

Abstract

Background

Common warts are small, grainy skin growths that occur most often on your fingers or hands. Rough to the touch, common warts also often feature a pattern of tiny black dots, which are small, clotted blood vessels.

Common warts are caused by a virus and are transmitted by touch. It can take a wart as long as two to six months to develop after your skin has been exposed to the virus. Common warts are usually harmless and eventually disappear on their own. But many people choose to remove them because they find them bothersome or embarrassing

Aims

This study aims to evaluate the safety and efficacy of intralesional Vitamin D3 for the treatment of cutaneous warts.

SUBJECT And Method

A total of 24 patients received Vitamin D3 injections. Some of these patients used different ways to remove wart like by topical creams or by cryotherapy , but the wart recurrent. The study included 15 females and 9 males. The mean duration of disease in years was 2.3 years . (1-10) age group were the most of the sample 9(37.5%).

RESULT

A total of 24 patients received Vitamin D3 injections. Some of these patients used different ways to remove wart like by topical creams or by cryotherapy , but the wart recurrent. The study included 15 females and 9 males. The mean duration of disease in years was 2.3 years . (1-10) age group were the most of the sample 9(37.5%). the 8(33.3%) of patient response to the intralesional injections while 16(66.6%) not response to intralesional injections.

Adverse effects were seen in 21 (87.5%) patients, but all were minor with no life-threatening complications. Swelling at the site of injection was the most common adverse effect seen in 18 (75%) patients which resolved without any treatment in 4 weeks .Severe pain during injection was seen in 17 case (70.8%) ,Dyspigmentation was seen in three patient and tow patient have fever while 5 patient have myalgia.

CONCLUSION

Intralesional vit.D3 in common wart is effective , appropriate , un expensive and safe.

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude to my teacher , DR. Intisar Ahmed who gave me the golden opportunity to do this wonderful project of ACCOUNTANCY

Who also helped me in completing my project. I came to know about so many new things I am really thankful to them. Secondly i would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame.

Mariam Ayad

Dedication

I would like to dedicate my work to my family. They instilled in me a desire to learn and made sacrifices so I would have access to high quality education from an early age. Also, this is dedicated to my close friends who have always supported me throughout my years of studies.

content

lists of tables and figures

Introduction

All consecutive patients, both male and female, having cutaneous warts (with no prior treatment with either topical or destructive modalities for at least 6 months prior) were primarily selected for the study. Patients <12 and >70 years, pregnant and lactating females, any evidence of immunosuppression including HIV and with a prior history of hypersensitivity to Vitamin D3 were excluded from the study.

Cutaneous warts were diagnosed by history and clinical features. Baseline evaluation was made at the first visit, and the demographic data were recorded in a structured questionnaire designed for this study. A graphical wart map was prepared for each patient; location, number, size and type of wart were recorded on it at each visit. Photographs were taken at each visit to support the recorded data.

Clinical response was documented by recording the decrease in number and size of warty lesions at each visit i.e., at 2 weekly intervals for 4 sessions and 6 months after the last injection. Complete clearance was considered if all the warts both treated and distant warts resolved completely. Moderate response if there were 50 to <100% reductions in both size and number of lesions, mild response was considered if response was between 1% and <50%.[14]

Larger warts were considered for the injection. A maximum of 2 warts were treated at each session.

The injections were repeated at 2 weekly intervals for a maximum of four injections. If complete clearance was achieved before four injections, the treatment was stopped, and patient was followed up for recurrence. Patients were evaluated for treatment efficacy and adverse reactions every 2 weeks for first 2 months and monthly thereafter to record for any recurrence for 6 months.

Materials and Methods:

Patients with multiple warts were selected for immunotherapy. Vitamin D3 (0.2 ml, 15 mg/ml) was injected to the base of warts after injecting with lignocaine (0.2 ml, 20 mg/ml). The injections were repeated 2 weeks apart for a maximum of 4 sessions or until complete clearance, whichever was earlier. A maximum of 2 warts were treated per session and patients were followed up for 6 months after the last injection.

Result

A total of 24 patients received Vitamin D3 injections. Some of these patients used different ways to remove wart like by topical creams or by cryotherapy , but the wart recurrent. The study included 15 females and 9 males. The mean duration of disease in years was 2.3 years . (1-10) age group were the most of the sample 9(37.5%).

Table 1 : demographic characteristics of 24 patient .

characteristics	Frequency	Percentage
Gender		
Male	9	37.5%
Female	15	62.5%
Age group		
1-10	9	37.5%
11-20	5	20.8%
21-30	4	16.7%
31-40	3	12.5%
41-50	2	8.3%
51-60	1	4.2%

Table 2 show that all of patient were verruca vulgaris.

Table 2: Type of warts.

The type	Frequency	Percentage
Verruca vulgaris	24	100%
Filiform wart	0	0
Palmoplantar wart	0	0

Table 3 show that most of patient have one sessions as shown below

Table 3 : Number of sessions

Number of sessions	Frequency	Percentage
1session	8	33.3%
2 Sessions	5	20.8%
3 Sessions	4	16.6%
4 Sessions	2	8.3%
5 Sessions	5	20.8%

Table 4 show that the 8(33.3%) of patient response to the intralesional injections while 16(66.6%) not response to intralesional injections.

Table 4 : Treatment response.

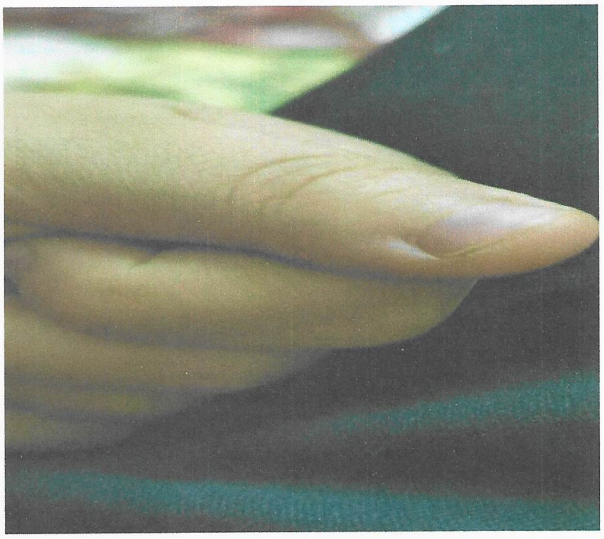
Treatment response.	Frequency	Percentage
Yes	8	33.3%
No	16	66.6%

Adverse effects were seen in 21 (87.5%) patients, but all were minor with no life-threatening complications. Swelling at the site of injection was the most common adverse effect seen in 18 (75%) patients which resolved without any treatment in 4 weeks .Severe pain during injection was seen in 17 case (70.8%) ,Dyspigmentation was seen in three patient and tow patient have fever while 5 patient have myalgia.

Table5 : adverse affect of intralesional injection.

Adverse effect	Frequency	Percentage
Severe pain during injection	17	70.8%
dyspigmentation	3	12.5%
Swelling	18	75%
Fever	2	8.3%
Myalgia	5	20.8%

Below some picture that show how the patient's response to intralesional vit D3 injections



Discussion

Treatment of multiple warts especially palmoplantar warts is difficult and it needs multiple sittings by destructive methods such as cryotherapy and electrocautery. These destructive procedures are usually associated with scarring and pigmentation. In addition, some warts are resistant to these treatments and recurrence rate is also high. Hence, immunotherapy is the best available option in treating warts as it boosts the immune system to HPV virus leading to clearance of both treated and untreated warts. Recurrence rate is also low when compared to destructive method

In this present study, we used intralesional Vitamin D3 which was a relatively new treatment option for warts. Several studies have been published showing the efficacy of topical Vitamin D for the treatment of warts

the effect of Vitamin D3 derivatives on warts was speculated to be derived from its potential to regulate epidermal cell proliferation and differentiation and to modulate cytokine production. Recently, it was observed that there is toll-like receptor activation of human macrophages which upregulated the expression of Vitamin D receptor (VDR) and Vitamin D-1-hydroxylase genes, leading to induction of the antimicrobial peptide(20).

Conclusion

Intralesional Vitamin D3 injection is an innovative approach for the treatment of warts. It is inexpensive, safe and special value to treat multiple warts in developing countries. Although our study is limited by its small sample size and lack of randomisation, the results are encouraging. Well-designed, large randomised placebo-controlled studies are required in future to confirm the efficacy of intralesional Vitamin D3 injection for the treatment of multiple warts in clinical practice

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