

Efficacy Of Intralesional Immunotherapy With Measles, Mumps And Rubella Vaccine For Multiple Warts

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ABSTRACT

To analyze the benefit of using intralesional Measles, Mumps and Rubella vaccine (MMR) for patients with multiple warts.50 Subjects of age groups >8 years of age, with multiple warts who has not undergone treatment for the past 6 months were chosen and given intralesional MMR, a quantity of 0.5ml is given in the largest wart among the multiple warts. A maximum of upto5 injections can be given in an interval of 2 weeks. Follow up was made every 2 weeks for 6 weeks and then monthly once for 6 months to detect any recurrence. Complete responsewas seen in 36 (72%), partial response in 8 (16%) and no response in 6 (12%) were observed.Intralesional Immunotherapy with MMR vaccine was found to be simple, effective and safe treatment for multiple warts. This treatment proved to be cost effective for the patients as well as chance of recurrence is less compared with other treatment modalities.

Key Words: *Measles, Mumps and Rubella vaccine*

I. INTRODUCTION

Warts are common and usually harmless. They are caused by the human papillomavirus (HPV). Warts are caused by HPV.Multiple warts in patients are resistant to treatment.Commonly followed treatment modalities include topical salicylic acid application, cryotherapy, radio frequency ablation, surgical excision, topical podophyllotoxin, trichloroacetic acid, 5 fluorouracil, contact sensitizers, imiquimod can be used but in case of multiple warts, treatment becomes difficult both for the patient and the treating dermatologist. Recurrence rate is high. Intralesional therapy with various agents have been coming up which includes BCG(BacilleCalmitte Guerin), MMR (Measles, Mumps and Rubella), interferons. Here Intralesional immunotherapy with MMR is being analysed for a group of 50 patients. Groups of patient's age groups above 8 years of age, who does not have an allergic history to MMR or any other vaccines, are selected and treated with MMR and followed up for a period of 6 months and their efficacy is studied. This works via the principle of Immunomodulation and induction of immune system. Due to high prevalence of warts in the society in all age group of patients, this method seems to be more effective with patient compliance and decrease in the rate of recurrence.

II. METHODOLOGY

This was a prospective study conducted in Meenakshi medical college and research institute, Kanchipuram, for a period of 1 year. A total of 50 patients who gave informed consent were chosen for the study. Study was started after getting permission from the department.

Inclusion criteria: Clinically diagnosed patients having multiple warts(more than 4) for more than 6 months is chosen. Patients of both sexes, age group above 8years. Patients who have not taken any topical or systemic treatment.

Exclusion criteria: Patients with past history of allergic response to MMR or any other vaccine.

Patient who have taken treatment within the period of 6 months.

Pregnant and lactating women. Patients with immunosuppression / HIV infection. Detailed information based on the inclusion criteria is included and the study was organized. Clinical photography of the lesions, their size and number has been taken to know the improvement before and after the study. All patients received a dose of 0.5ml of intralesional MMR in the largest wart, with an interval of 2 weeks on the same wart. A maximum of 5 doses were given. The response was analysed based on the decrease in size of the warts, decrease in the number of warts and photographic comparison. Response is complete if there is complete clearance, partial if 50-99% regression in the size and number and no response if 0-49% decrease in wart.

Follow up was made for every 2 weeks for first 6 weeks and then for monthly once for 6 months.

III. RESULTS AND DISCUSSION

Table 1. A total of 50 patients were studied for a period of 1 year

Age group	Males	Females	Total
<18 years	05 (10%)	08 (16%)	13 (26%)
18-35 years	18 (26%)	10 (20%)	28 (56%)
>35 years	03 (6%)	06 (12%)	9 (18%)
Total	26 (52%)	24 (48%)	50 (100%)

Table 1 shows that out of 50 patients, 26 were males and 24 were female patients. Maximum group belongs to the age group of 18-35 (56%) years and minimal group belongs above the age of 35 years (18%).

Table 2 represents that out of 50 patients, 36 patients responded well to the treatment without recurrence, partial response was seen to 8 patients and no response for 6 patients.

Response	Male	Female	Total
Complete	18 (26%)	18(26%)	36(72%)
Partial	4 (8%)	2(4%)	8(16%)
No response	4(8%)	4(8%)	6(12%)
Total	26(52%)	24(48%)	50(100%)

Warts are mucocutaneous disease caused due to Human Papilloma Virus (HPV [1]. HPV infection is acquired from direct contact with an affected individual or from the environment (eg, from contaminated floors or surfaces). There are well over one hundred types of HPV. Types 1, 2, 3, 4, 10, 27 and 57 are most often implicated in the aetiology of cutaneous warts. Infection of keratinocytes causes hyperkeratinisation and epidermal thickening. Trauma and wetness are contributory in contracting warts. The virus is more likely to spread around other parts of the body if the wart is damaged by trauma or scratching. There are various types of warts. They are common warts, palmoplantar warts, filiform warts, plane warts and genital warts. In case of multiple warts treatment becomes very difficult both for the doctor and the patient. Various treatment options are available such as cryotherapy, electrocautery, topical application of salicylic acid, trichloroacetic acid, podophyllin, retinoids. Although most of the therapeutic options result in clearing the virus within 1-6 months, relapses and new lesions appear in 20-30% of the patients as a result of failure of the cellular immune system to detect and remove the lesions [2].

The present treatment modalities are painful, ineffective, costly, and may be associated with disfiguring, scarring and high recurrence rates [3]. On the other hand, several immunotherapeutic agents with various efficacies have been used for the treatment of different types of warts [4]. Among all these methods the recently used intralesional immunotherapy has shown to be effective and safe modality. It has the potential advantage of clearance of both treated and untreated distant warts without scarring, a presumed lower rate of recurrence and a high safety profile [5]. The results of present study demonstrated high therapeutic response to intralesional MMR vaccine in the treatment of warts. The exact mechanism of action is obscure. Intralesional antigen injection induces strong non specific inflammatory response against HPV infected cells [6]. Intralesional immunotherapy with MMR vaccine has shown significant advantages over other treatments. Most of the recently available treatments are painful, need multiple visits and also the chance of recurrence is high. Intralesional immunotherapy with MMR leads to clearance of distant non injected warts and the chance of recurrence is less. This study proved to be cost effective with a very good patient compliance and with lesser chance of recurrence. We suggest the use of Intra-lesional MMR vaccine in case of multiple warts.

IV. CONCLUSION

Intralesional immunotherapy with MMR vaccine is found to be a simple, effective and safe treatment of warts.

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