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Intralesional MMR in WARTS: A Research Article

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ABSTARCT

Warts are benign epidermal tumor caused by human papilloma virus. Immunotherapy appears to enhance virus recognition by immune system, allowing clearance of treated wart, distant warts and helps to prevent infection.0.5 ml intralesional MMR vaccine into a single wart or the largest wart in case of multiple lesions. Intralesional vaccine was given every 02 weeks into the same wart for 03 doses. Intralesional immunotherapy with MMR vaccine was found to be a simple, effective, and safe treatment for warts. This study proved to be cost effective as patients can be treated with just 03 doses of MMR vaccine given at the interval of two weeks.

INTRODUCTION

Warts are benign epidermal tumor caused by human papilloma virus. Transmission of Warts occur from direct person to person contact or indirectly by fomites. Most frequently seen on the hands of children and young adults but may be located on any cutaneous or mucosal surface.

Warts or verrucae are known to be recurrent and may be resistant to treatment. Most of the routinely used treatment modalities are destructive in nature and can cause scarring.

Immunotherapy appears to enhance virus recognition by immune system, allowing clearance of treated wart, distant warts and helps to prevent infection. Various immunotherapeutic approaches have been attempted using topical contact sensitizers, oral immunomodulatory, interferons and various viral, fungal and bacterial antigens which are administered intralesionally or intradermally. These interventions are thought to influence the release of different cytokines such as interleukin-2, interleukin-4, interleukin-5, interleukin-8, interferon-γ and tumor necrosis factor-α that stimulate a strong immune response against human papilloma virus.[1] Antigen injections are also thought to be associated with the proliferation of peripheral blood mononuclear cells that promote Th1 cytokine responses and further activate cytotoxic T-cells and natural killer cells to eradicate human papillomavirus-infected cells.[1] Intralesional MMR induces strong nonspecific

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inflammatory response against the human papilloma virus infected cells.

MATERIAL AND METHODS

Eighty patients of age ranging from 10–45 years attending the dermatology outpatient department of C U Shah medical College, surendranagar with the clinical diagnosis of cutaneous warts were included in the study. Patients were recruited irrespective of the number and duration of the warts and whether they had been previously treated or not, as long as they had not taken any treatment in the 2 months preceding enrollment. 60 patients completed the study.

Inclusion criteria:

Patients having single or multiple warts with more than 1-month duration.

Patients of both genders of all age group.

Not taking any systemic or topical treatment for warts.

Exclusion criteria:

Past history of allergic response to any other vaccine.

Pregnant or lactating woman

Patients with any bacterial infection

Methods:

All patients received a dose of 0.5 ml intralesional MMR vaccine into a single wart or the largest wart in case of multiple lesions. Intralesional vaccine was given every 02 weeks into the same wart for 03 doses.

RESULTS

Complete clearance was achieved in 40 (50%) of 80 patients. To achieve complete response, the mean number of intralesional injections required were 2.40 ± 0.68 and the mean duration was 7.20 ± 2.07 weeks. Partial response was achieved in 20 (25%) patients. A statistically significant inverse correlation was found between the duration of warts and the degree of response ($r = -0.283$ $P = 0.008$, Pearson correlation test), indicating that patients with shorter disease duration responded better. Eight (10%) patients had recurrence of their warts during the 6-month follow-up period. The treatment was well tolerated. Pain at the injection site (35 [43.75%]), erythema (10[12.5%]) and post-inflammatory hyperpigmentation (15 [18.75%]) were the main adverse effects noted in the treated patients.

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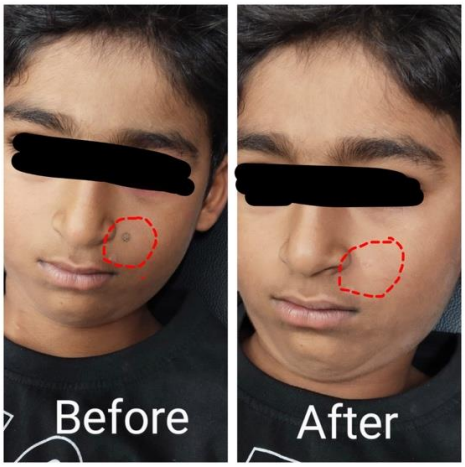

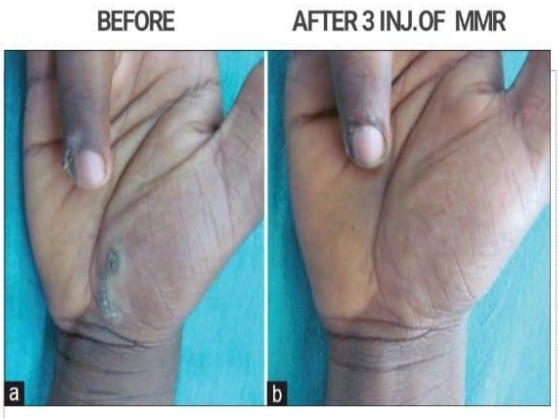

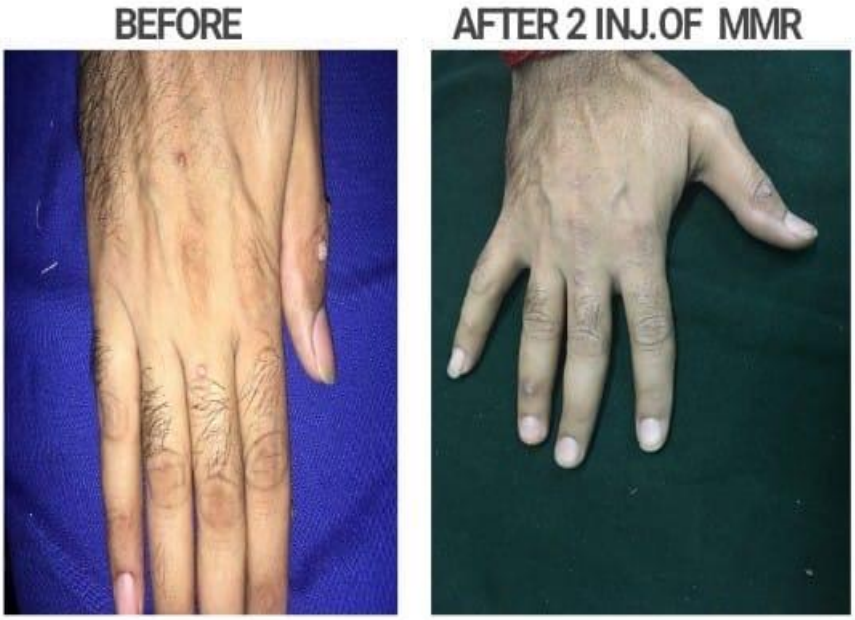

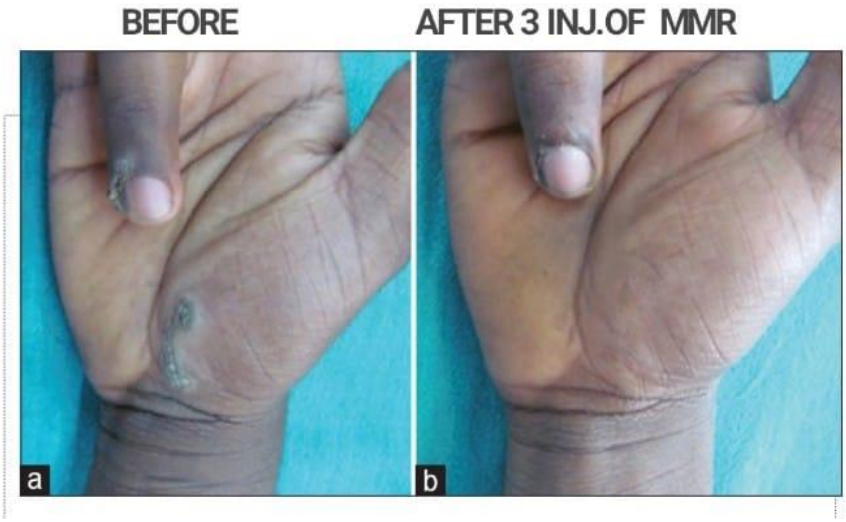

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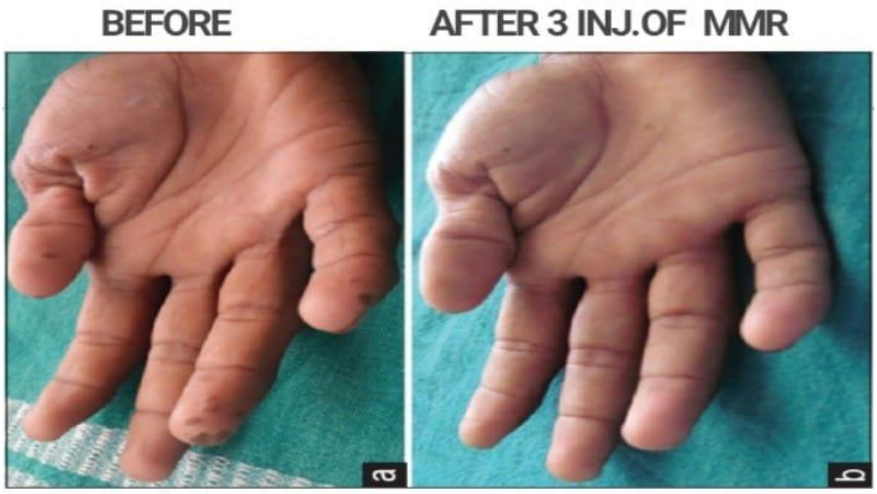

Advantages:

Clearance of both treated and untreated distant warts.

Lower rate of recurrence, High safety profile.

CONCLUSION

Intralesional immunotherapy with MMR vaccine was found to be a simple, effective, and safe treatment for warts. This study proved to be cost effective as patients can be treated with just 03 doses of MMR vaccine given at the interval of two weeks.

The response in different studies varies with the antigen and therefore it is difficult to interpret which antigen is the safest and the most effective. The difference in the study population selected for treatment, the number of patients, the type and duration of warts and the number of intralesional injections could be the reasons for this variation in response. It is possible that a better response might have been obtained if we had injected a higher volume of vaccine (>0.5 ml).[4]

We acknowledge the limitations of our study; it was an open-labelled study without randomization or controls.

Financial support and sponsorship: Nil

Conflicts of interest: none

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