



An Excellent Efficacy of MMR Vaccine in the Treatment of Palmoplantar Wartsa Case Series

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Abstract

Objectives

To study the efficacy of intralesional MMR vaccine in the treatment of palmoplantar warts

Materials and Methods

The case series documents the efficacy of intralesional MMR vaccine in the treatment of palmoplantar warts observed in 10 patients who attended dermatology OPD all the reported cases had palmoplantar warts .Intralesional therapy was repeated every 2 weeks for 5 sessions.

Results

All the included patients showed complete response to intralesional MMR repeated every 2 wks. Of these 8 patients showed complete resolution in 5

sessions while 2 patients showed resolution in 3 sessions.

Conclusion

Intralesional MMR vaccine showed excellent therapeutic efficacy in the treatment of palmoplantar warts in the present case series.

Keywords

MMR vaccine, palmoplantar warts, intralesional immunotherapy.

Introduction

Human papilloma viruses are small DNA viruses that can infect both keratinizing and non keratinizing epithelial producing cutaneous, oral,

genital and laryngeal warts. Common warts or Verruca vulgaris are mainly caused by HPV(Human papilloma virus) infections i.e;HPV 2 and HPV 1,4,7,27 & 57; can occur at any age but most commonly in teenagers and adults .They have the potential to heal spontaneously but take longer periods of time to heal and recurrences are more common. Warts being a chronic condition many therapeutic interventions aimed at elimination of the virus were implemented of these intralesional immunotherapy stands out. Intralesional immunotherapy aims at the patients immune system by increasing production of cytokines that target the clearing of virus not only at the site of injection but also from the body.

In the present case series we document the therapeutic efficacy of intralesional MMR vaccine in palmoplantar warts.

Materials and Methods

In the present case series, a total of 10 patients with palmoplantar warts aged between 15 to 35 years were included. They were detailed about the procedure and complications with a written informed consent from the patient or his guardian. Intralesional immunotherapy with MMR vaccine was given in all the lesions in a dose of 0.2 - 0.3ml per lesion. A total of 5 sessions were given with 2 weeks interval and was followed by application of keratolytic agents in

between the treatment sessions. Photographs were taken following each session for tracking the progress of resolution of warts.

Results

A total of 10 patients were included in this case series of knowing the efficacy of MMR vaccine in the treatment of palmoplantar warts.

Of these 10 patients maximum reported to have Palmar and periungual warts. Three patients had Palmar warts three had periungual warts and two patients had palmoplantar warts and the rest two had plantar warts. In all the 10 patients included none had a previous history of treatment taken for warts. They reported duration of 1-2 years.

With the addition of topical keratolytic agents in between the treatment sessions enhances the efficacy of MMR Vaccine. Of the 10 included cases 8 patients showed complete resolution of the lesions in 5 sessions while two patients showed excellent therapeutic efficacy and resolution occurred in three sessions.

Patients who received intralesional immunotherapy complained of pain and erythema, swelling that subsided in a day. They were given symptomatic treatment. This treatment modality was helpful in treating warts present at difficult to treat locations like subungual or periungual warts.

Table 1: Details of Patients who received MMR Vaccine

| S.No | Age | Gender | Site of lesion | Duration of lesion | Any treatment taken | No. Of sessions | Response to treatment | Complications |
|------|-----|--------|----------------|--------------------|---------------------|-----------------|-----------------------|--|
| 1 | 25 | Male | Palmoplantar | 2yrs | Nil | 5 | Total resolution | Pain Erythema and swelling subsided in a day |
| 2 | 15 | Male | Periungual | 1.6yrs | Nil | 5 | Total resolution | Pain Erythema and swelling subsided in a day |
| 3 | 28 | Male | Palmar | 1.4yrs | Nil | 5 | Total resolution | Pain Erythema and swelling subsided in a day |
| 4 | 35 | Male | Plantar | 1yr | Nil | 5 | Total resolution | Pain Erythema and swelling subsided in a day |
| 5 | 30 | Female | Palmoplantar | 1.2yrs | Nil | 5 | Total resolution | Pain Erythema and swelling subsided in a day |
| 6 | 22 | Male | Periungual | 2yrs | Nil | 5 | Total resolution | Pain Erythema and swelling subsided in a day |
| 7 | 26 | Male | Palmar | 1yr | Nil | 5 | Total resolution | Pain Erythema and swelling subsided in a day |
| 8 | 34 | Female | Plantar | 1yr | Nil | 5 | Total resolution | Pain Erythema and swelling subsided in a day |
| 9 | 19 | | Periungual | 6months | Nil | 3 | Total resolution | Erythema and swelling subsided in a day |
| 10 | 20 | Female | Palmar | 9months | Nil | 3 | Total resolution | Pain Erythema and swelling subsided in a day |

Figure 1: Before and after treatment of plantar warts with intralesional MMR Vaccine

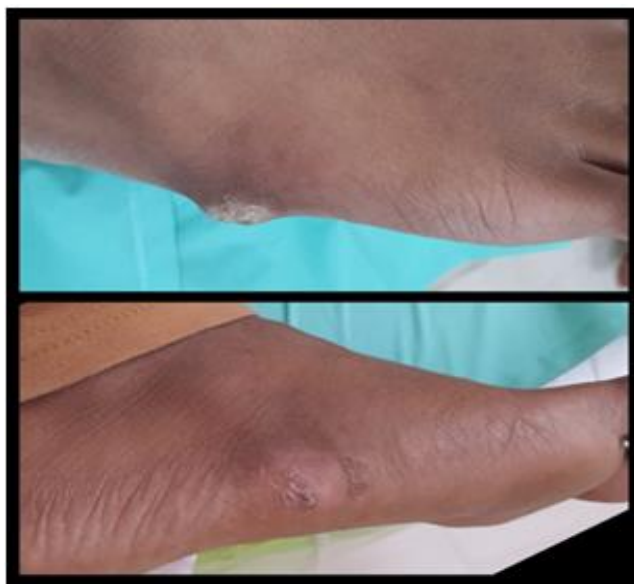


Figure 2: Before and after treatment of Palmar warts with intralesional MMR Vaccine



Figure 3: Before and after treatment of Periungual warts with intralesional MMR Vaccine



Figure 4: Before and after treatment of Periungual warts with intralesional MMR Vaccine



Figure 5: Before and after treatment of Palmar warts with intralesional MMR Vaccine



Figure 6: Before and after treatment of Plantar warts with intralesional MMR Vaccine



Figure 7: Before and after treatment of Periungual warts with intralesional MMR Vaccine



Discussion

Among the various therapeutic modalities in the elimination of HPV infection some target and stimulate the patient's immune system i.e.; immunotherapy; the vaccines used are BCG vaccine, MMR vaccine, Mycobacterium w vaccine, Vitamin D, Candida antigen and auto implantation.^[1-15]

Cell-mediated immunity against human papilloma virus helps in spontaneous resolution of warts. Immunotherapy modulates the immune system and helps in clearance of warts. Relative ease of procurement makes MMR vaccine an attractive option. Further, most people have been exposed to this vaccine in childhood as part of the national immunization program, hence, the possibility of adverse reactions is rare.

The previous studies have employed two methods of MMR administration. In both methods, MMR vaccine is injected only into the largest wart. In both methods, injections were repeated after 2–3 weeks and 3–6 sessions were given.

Naetal., in a 2 – year retrospective study of using MMR vaccine as intralesional immunotherapy for warts, noted that among 136 patients, 26.5% showed complete response.^[1] Adverse effects noted were pain, pruritus, and burning. They concluded that a complete response following MMR immunotherapy was higher when warts were of < 6 months duration, a better response was seen in common warts when compared to plane warts and efficacy increased with the number of treatment sessions.^[1]

Zamanian et al. studied the efficacy of intralesional MMR vaccine in a double-blind randomized control clinical trial. Comparing the efficacy of MMR vaccine against normal saline, they noted complete cure in 75% of those who received MMR vaccine as against the 25% in the control group.^[5]

Chauhan et al. in 2019, in a prospective study of 52 patients noted that 82.4% had complete clearance. In 7.8% of patients, the warts subsided completely after one dose itself.^[8]

In a case series by Bipin et al 2021 a total of 11 patients were included for the treatment of recalcitrant warts with intralesional MMR vaccine. Nine patients (81.9%) showed complete response to treatment. One patient did not return for treatment after two sessions (9.1%). One showed incomplete treatment response (9.1%). The adverse reactions noted among the 11 patients were pain (3/11, 27.3%) and secondary bacterial infection (1/11, 9.1%).

Conclusion

The present case series of treatment of palmoplantar warts with intralesional MMR vaccine proved to be safe and effective therapeutic modality except for complications of pain.

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