

A study of homologous autoimplantation therapy for multiple warts

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Abstract

Background Most of the available treatment modalities of warts are destructive procedures like chemical cautery, lasers, and radiofrequency ablation which are not only painful but also lead to scarring which are cosmetically unacceptable especially if the warts are multiple. Hence there is a need for simple, safe and effective treatment modality for multiple warts.

Objective To evaluate the efficacy of homologous autoimplantation therapy for multiple warts.

Methods A total of 46 patients with multiple warts (>5) were enrolled. A well-developed wart was chosen as a donor and under strict aseptic precautions and local anaesthesia full depth wart tissue was removed. A small subcutaneous pocket was made at the flexor aspect of the non-dominant forearm. The harvested tissue was gently introduced into the subcutaneous pocket. Patients were followed up monthly for 3 months. Photographic evidences were taken at each visit to have an objective comparison.

Results Out of 46 patients, 23(50%) patients had complete resolution, 6(13.04%) patients had partial resolution, 4(8.69%) patients had no improvement after 3 months of auto implantation procedure and 13(28.26%) patients were lost to follow-up.

Conclusion Auto implantation of wart is a safe, simple and efficacious procedure for the treatment of multiple warts. Our study was limited by a smaller sample size and lacked control subjects to assess spontaneous resolution of warts. Hence there is a need of a larger and a randomized double-blind study.

Key words

Multiple warts, autoimplantation.

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Introduction

Warts are benign tumours that commonly involve the skin and other epithelial tissues like oral and anogenital mucosae. The etiologic agents for these infections are a class of double stranded DNA viruses called human

papillomaviruses.¹ Various clinical manifestations are verruca vulgaris, verruca plana, verruca palmaris and plantaris, and genital warts (condyloma acuminata).² In spite of various therapeutic modalities being available, no single therapy has been found to be efficacious and cosmetically acceptable in majority of the patients.^{3,4} Most of the procedures involving the treatment of warts are ablative procedures which are not only inconvenient and painful but might also lead to ugly scars causing physical and psychological trauma. Autoimplantation of viral wart particles in subcutaneous tissue or in the dermis is thought to upregulate cell-mediated immunity leading to clearance of warts. Based on this hypothesis, autoimplantation as a treatment option is proposed for multiple warts.⁵

Materials and methods

This was hospital based prospective study conducted in outpatient department of Karnataka Institute of Medical Sciences. A total of 46 patients of multiple warts (>5) were enrolled. Pregnant women, lactating mothers, immunosuppressed individuals and patients not willing to give consent were excluded. Under all aseptic precautions, 3-4 mm size wart papule was incised with a scalpel blade and was kept in normal saline. A small incision was made on the anterior aspect of forearm to create a pocket in the dermis. Harvested wart was crushed and introduced into the pocket. Incision was sutured

to secure the wart particle in the dermis. Tight dressing with micropore was done. The patients were advised not to wet or remove the dressing at the recipient site for the next seven days. Systemic antibiotics were prescribed for a period of five days. Patients were asked to meet after seven days when the dressing and suture were removed. Patients were followed up every month for a period of three months. Resolution of warts within a period of 3 months post-procedure was considered as successful treatment.

Results

Out of 46 patients, 41 (89.13%) patients were males and 5(10.86%) were females. The age group of the patients ranged from 12 years to 63 years, with a mean age of 24.7 years. The duration of the lesions varied from 1 month to one year with 28 (60.1%) patients presenting with the history of lesions of less than 6 months duration, and 18 (39.9%) patients of >6months duration.⁶ Palms were the most common site involved in our study 17 (36.95%) (**Figure 1**) followed by dorsum of hands in 14 (30.43%), dorsum of feet in 12 (26.08%), forearm in 8 (17.39%), knee in 6 (13.04%), leg in 5(10.86%), arms in 5(10.86%), sole in 5 (10.86%), face and neck in 2 (4.34%), periungual areas in 2 (4.34%), retroauricular area in 2 (4.34%) and chest in 1 patient (2.17%).

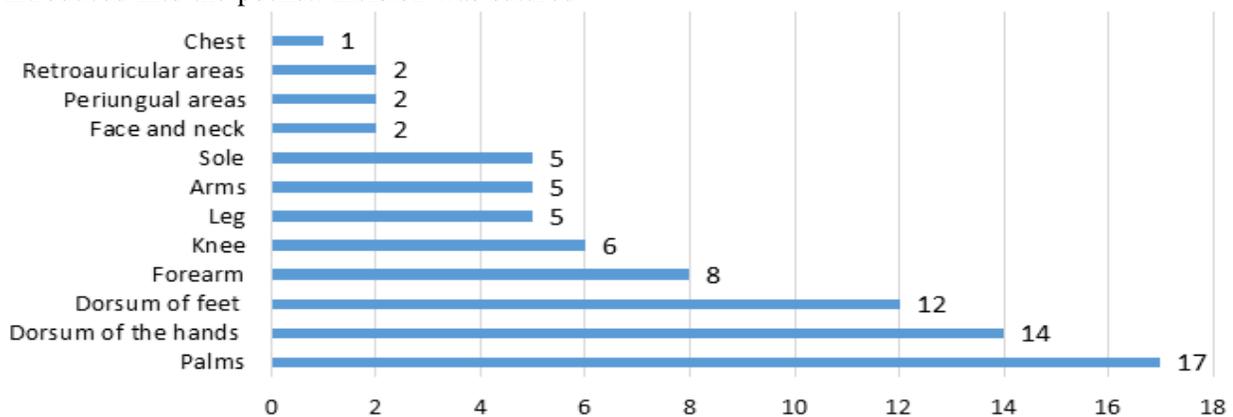


Figure 1 Sites of involvement.



Figure 2 Palmar warts before treatment.



Figure 3. Palmar warts after treatment.

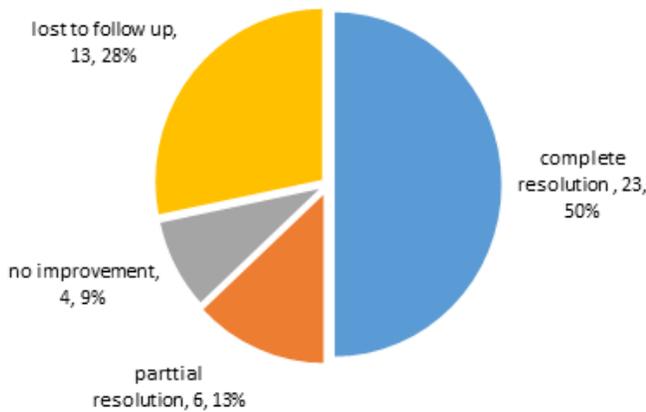


Figure 4 Response to treatment.

Out of 46 patients, 23 (50%) patients had complete resolution (**Figure 2 & 3**), 6 (13.04%) patients had partial resolution, 4 (8.69%) patients had no improvement after 3 months of auto implantation procedure and 13(28.26%) patients were lost to follow-up (**Figure 4**).

Discussion

Cutaneous warts are commonly seen in dermatology practice with overall prevalence of 7–10%. They are most commonly found on the hands and feet but can also be found on the face, eyelids, and torso. The causative agent is human papillomavirus (HPV). There are over hundred identified types of HPV; the most common types of cutaneous warts are Types 1, 2, 3, 4, 7, 10, 27, and 57. Cutaneous warts can present in various forms and sizes. Various clinical manifestations are verruca vulgaris, verruca plana, verruca palmaris and plantaris, and genital warts or condyloma acuminata.⁵ These Warts not only have unsightly appearance but also bother patients by causing pain and discomfort.¹ There are a number of therapeutic modalities for warts but none is found to be 100% effective.⁷ With autoimplantation therapy, there is a change in immune status of the patient leading to clearance in most of the patients.⁵ Virus specific immune stimulation against HPV has been attempted by autoimplantation of the wart tissue into uninvolved skin by Shivkumar *et al.*⁸ by injecting crushed wart tissue into muscle by Srivastava *et al.*⁹ and into skin by Nischal *et al.*¹⁰ and by quadrivalent HPV vaccines.^{11,12} Repeated exposures to viral antigens showed the development of cell-mediated immunity and appearance of virus-specific immunoglobulin M (IgM) and immunoglobulin G (IgG) antibodies.¹³ Most of our patients were males in concurrence with other studies. Disease duration in our study was of more than 6 months in majority of our patients (28 patients). This was in concurrence with similar study performed by shivakumar *et al.*⁸ A complete clearance of warts was observed in 50% of cases, which is less when compared to Nischal *et al.* (74.1%)¹⁰ and Shivkumar *et al.* (73.3%)⁸ but it is more when compared to Usman *et al.*¹⁴ who reported only 44% clearance rate.

Conclusion

Auto implantation of wart is a safe, simple and efficacious procedure for the treatment of multiple warts. Our study was limited by a smaller sample size and lacked control subjects to assess spontaneous resolution of warts. Hence there is a need of a larger and a randomized double-blind study.

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