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Case Report

A case series of treatment of common wart with intralesional immunotherapy and oral zinc

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Abstract Common cutaneous warts are dermatological conditions caused by the human papilloma virus (HPV). Despite of being a benign condition, it sometimes leads to cosmetic disfigurement. Warts also have a tendency to koebnerize, and can be transmitted to others thus making adequate and timely management necessary. Though there are various conventional treatments available, topical, intralesional and systemic immunotherapies are creating a significant space for themselves in the management of warts because of their non destructive nature. Through this case series of 5 cases of common cutaneous warts, our focus was on a combination of intralesional immunotherapy and oral zinc acetate and simultaneously compared it with topical retinoids on some of the lesions.

Key words
Common wart, intralesional, immunotherapy, zinc.

Case reports

Case 1: A 27 year old male patient presented to the dermatology opd with common wart present over the dorsum of left hand and extensor of left arm. Patient first noticed such lesions 2 years back , on removal of venflam placed in dorsum of left hand. He visited one local doctor who applied trichloroacetic acid 50% weekly for 10 weeks. Few lesions improved but some remained there without progressing.

He noticed similar lesions on extensor of upper left arm 6 months back, for which he approached a dermatologist who advised a topical formulation containing 17% salicylic acid & 17% lactic acid. When patient approached skin OPD of our hospital for consultation regarding same, we injected BCG (Bacillus Calmette Guerin) intralesional in hand lesions and advised him to apply topical retinoid 0.05% on arm

Figure 1 Common warts before I/L BCG vaccine.

Figure 2 Common warts 1 week after BCG vaccine (40% clearance).

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Figure 3 Common warts 2 weeks after BCG vaccine (80% clearance).

Figure 4 Common warts 4 weeks after BCG vaccine (>90% clearance).

Figure 5 Common warts 2 weeks after MMR vaccine (70% clearance).

Figure 6 Common warts 4 weeks after MMR vaccine (80% clearance).

lesion and left the keloid as such. Patient was followed and was reinjected the drug every week and photographs taken with 16 megapixel camera of an android phone. The improvement was more in hand lesions than arm lesions.

Finally, patient was prescribed Zinc sulphate 200mg daily for 1month and called for monthly follow up to see recurrence. Patient did not develop any lesion till his 6th follow up visit.

Case 2: A 17 year old female came to dermatology OPD with c/o elevated skin lesions on dorsum of left foot which was clinically diagnosed as common wart. She was started on I/L BCG on foot lesion and topical retinoid on arm lesion. On her second visit she had developed ulceration on BCG injected lesion, which healed spontaneously without scarring in subsequent visit. While arm lesions cleared partially. Photography was done as mentioned above and documented.

Case 3: A 40 year old male presented to skin OPD with similar complaint on right upper limb and left lower limb. The patient was injected I/L MMR vaccine 0.1ml in each of the lesions on arm given weekly while on lower limb lesions retinoid cream 0.05% was applied both lesions responded with complete clearance of lesions with I/L MMR and partial in case of topical retinoid cream at 4th visit. Photography was done as in 1st case and documented.

Case 4: A 6 year old female presented to skin OPD of the institute with c/o of similar looking lesions on dorsum of bilateral foot. Rt foot lesions were injected with I/L MMR 0.2ml in each and on left one topical retinoid.05% was applied daily at night.

Figure 7 Common wart 2weeks after BCG vaccine(75% clearance).

Figure 8 Common wart 4 weeks after I/L BCG vaccine (98%clearance).

Complete clearance of lesions was seen in cases of MMR injection and partial with retinoid. Photography was done as in first case and documented.

Case 5: Another 19 year old male presented with lesions of common wart on dorsum of bilateral foot. The patient was injected I/L BCG vaccine . Patient presented with ulceration at 1 week .Injection was painful and lesions had healed completely on fourth visit.

All the patients were prescribed oral zinc supplement 200mg for 6 months after clearance of lesions to reduce the recurrence.

Discussion

Use of BCG In a single-blind placebo-controlled trial done by Sharique *et al*. in 154 patients of cutaneous warts (common, plantar and plane warts), resolution with BCG vs. placebo was seen in 39.7% and 13.7% respectively.[2]

In another such study (n = 80), topically applied BCG paste (weekly for 6 weeks) has also been found to be effective in children with common warts and plane warts with 65% and 45% resolution, respectively.[3]

None of these patients reported any side effects in either of the two studies.

However, another report by Daulatabad *et al*. in 7 patients from India showed 57% patients developing a high incidence of flu-like symptoms precluding further doses, making one question of its safety in tuberculosis endemic countries like India.[4]

In our study two patients one in each on treatment with I/L MMR and I/L BCG showed flu like symptoms 4-6 hours after injections in first visit which did not recur in subsequent visits.

Use of MMR Nofal *et al* in his study injected MMR 0.5 ml into each cutaneous wart once in two weeks for up to 5 sittings resulting in 63% complete resolution at second visit and he noted pain, itching, erythema, and flu-like symptoms.[5]

But in my study MMR was injected 0.1ml in each cutaneous wart of 1mm² size and repeated every week till 6 weeks when 90% resolution was seen and no recurrence. In one of the patient in MMR group developed pustules after first visit which resolved with clearance and no scarring.

Contrary to this in another study by Na *et al*. on 136 patients of cutaneous warts had shown 50% reduction in the size of wart in 51% patients and only 5.6% had complete resolution.[6]

There have been many open-labelled studies using other immunotherapeutic agents for the treatment of warts.

With Mw vaccine, Singh *et al*. and Meena *et al*. observed complete response in 54.5% and 83% patients respectively along with response in distant warts in 86.3% and 70% patients respectively.[7,8]

Horn *et al*. found no difference in response among the individual antigens (Candida, 59%; mumps, 51%; Trichophyton, 62%; P = 0.48).[1]

Only few side effects have been reported by most studies, most common being injection site reactions and flu like symptoms which may be due to injection of the antigen into the circulation with subsequent immunological response and cytokines elaboration.[2]

Most of these reactions have been seen to last up to 24 hours, resolving subsequent to NSAIDS (non steroidal antiinflammatory drugs) administration.

Rare adverse events include painful purple digit and post-immunotherapy revealed cicatrix (PIRC).

Conclusion

Patients with common wart can initially be treated with I/L immunotherapy then after clearance of lesions patient can be kept on oral zinc acetate 200mg daily for 2 months to decrease the chances of recurrence.

References

1. Horn TD, Johnson SM, Helm RM, Roberson PK. Intralesional immunotherapy of warts with mumps, Candida, and Trichophyton skin test antigens: A single-blinded, randomized, and controlled trial. *Arch Dermatol.* 2005;**141(5)**:589-94.
2. Sharquie KE, Al Rawi JR, Al Nuaimy AA, Radhy SH. Bacille Calmette Guerin immunotherapy of viral warts. *Saudi Med J*. 2008;**29**:589-93.
3. Salem A, Nofal A, Hosny D. Treatment of common and plane warts in children with topical viable Bacillus Calmette Guerin. *Pediatr Dermatol.* 2013;**30**:60-3.
4. Daulatabad D, Pandhi D, Singal A. BCG vaccine for immunotherapy in warts: Is it really safe in a tuberculosis endemic area? *Dermatol Ther*. 2016;**29**:168-72.
5. Nofal A, Nofal E, Yosef A, Nofal H. Treatment of recalcitrant warts with intralesional measles, mumps, and rubella vaccine: Apromising approach. *Int J Dermatol*. 2015;**54**:667-71.
6. Na CH, Choi H, Song SH, Kim MS, Shin BS. Two year experience of using the measles, mumps and rubella vaccine as intralesional immunotherapy for warts. *Clin Exp Dermatol*. 2014;**39**:583-9
7. Singh S, Chouhan K, Gupta S. Intralesional immunotherapy with killed Mycobacterium indicus pranii vaccine for the treatment of extensive cutaneous warts. *Indian J Dermatol Venereol Leprol* 2014;**80**:509-14.
8. Meena JK, Malhotra AK, Mathur DK, Mathur DC. Intralesional immunotherapy with Mycobacterium w vaccine in patients with multiple cutaneous warts: Uncontrolled open study. *J Am Acad Dermatol* 2013; **149**:237-9.
9. Horn TD, Johnson SM, Helm RM, Roberson PK. Intralesional immunotherapy of warts with mumps, Candida, and Trichophyton skin test antigens: A single-blinded, randomized, and controlled trial. *Arch Dermatol*. 2005;**141**:589-94.