Letter to the Editor: Intralesional Immunotherapy with Measles-Mumps-Rubella Vaccine for Recalcitrant Facial Warts: A Report of Two Cases

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To the Editor

In March 2022 issue of the *Oman Medical Journal*, Al-Qassabi and Al Kindi [1] reported two Omani patients presented with recalcitrant facial warts that completely resolved with a single intralesional injection of the measles, mumps, and rubella (MMR) vaccine. I presume that the following points might hinder justifying intralesional MMR vaccine in the treatment of recalcitrant warts.

First, treating warts is still debatable and yet no general agreement is settled on the best modality of treatment despite various therapeutic interventions. The available data pointed out that immunotherapy with intralesional tuberculin and intradermal Bacillus Calmette-Guérin vaccine is safe, inexpensive, and effective modality in the treatment of all types of warts even if multiple or recalcitrant but immunotherapy with intralesional MMR vaccine carries less effectiveness and safety technique.[2]

Second, though the two cases in question were put on follow-up for a few months with no recurrence, immunotherapy generally necessitates long follow-up and therefore, it might not be an appropriate therapeutic modality for patients who seek a quick response.

Third, immunotherapy for warts encompasses the ability of the body's immune system to recognize certain bacterial, viral, and fungal antigens in a previously sensitized subject inducing type IV hypersensitivity reaction (up-regulated type 1 T helper (Th1) cytokines interleukin (IL)-1, tumor necrosis factor-alpha (TNF)-α, interferon-gamma (IFN-γ); down-regulated Th2 cytokines IL-10), not only to the injected antigen but also against the wart virus. Evaluation of the pattern of production of Th1 cytokines (IL-1, TNF-α, IFN-γ) and Th2 cytokines (IL-10) in blood samples of patients receiving immunotherapy has shown IL-1, TNF-α up-regulation, and IL-10 down-regulation which confirm the notion that cytokine milieu plays a crucial role in wart immunotherapy.[3] Regrettably, the relevant Th1 and Th2 cytokine profiles and antibody titers following intralesional MMR vaccine in the two cases in question were not assessed.

Fourth, I do agree with Al-Qassabi and Al Kindi [1] that large-scale randomized clinical trials are paramount in assessing the efficacy of intralesional MMR in treating patients with multiple recalcitrant warts.

References

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