

Letter to the Editor

Bleomycin Treatment of Warts

Dear *Cutis*[®]:

I read with interest the article entitled "Childhood Warts: An Update" (*Cutis*. 2004;73:379-384) by Drs. Bellew, Quartarolo, and Janniger, but I would like to comment on their description of morbidity associated with the use of intralesional bleomycin sulfate and to describe my experience using it. I estimate that I have performed more than 3000 treatments using bleomycin over the past 22 years. In my experience, I have found it to be an excellent treatment for periungual warts, a very good treatment for recalcitrant warts at other locations, a reasonable treatment for plantar warts on occasion, and a fair to middling treatment for subungual warts. Bellew and colleagues stated: "This therapy can be extremely painful"; however, it is not clear whether this statement reflected their own experience or published reports. I rarely use local anesthesia when employing this treatment. Almost every patient of mine has reported that intralesional bleomycin was far less painful than cryosurgery and the level of discomfort following treatment with intralesional bleomycin was comparable to cryosurgery.

Used in combination with paring, bleomycin may be inoculated percutaneously for mosaic warts. In 1991, Shelley and Shelley¹ described an inoculation technique using a bifurcated needle to vigorously macerate the wart and introduce bleomycin. This technique typically requires local anesthesia. My technique is to pare the wart, place a drop of solution over it, prick the surface several times with a 27-gauge needle on a tuberculin syringe, gradually use more pressure until the patient feels a pinprick, and then back off on the pressure a bit. I often will apply another drop of solution if it absorbs or drips off. After a few minutes, the wart appears a bit macerated and is covered with occlusive tape for a day. For a few small isolated plantar warts, the discomfort of injection generally is acceptable for adults, particularly those frustrated by numerous failed attempts at treatment. The hemorrhagic blister that forms occasionally is painful but may be drained if necessary. Percutaneous inoculation also works on flat warts, particularly those on the face, and the warts do not need to be occluded.

A vial of 15 U of bleomycin dissolved in 15 mL of 0.9% saline lasts approximately 6 months in my office and is used at least a few times a week. Typically I administer bleomycin with a 30-gauge half-inch needle bent approximately 30 degrees with the bevel facing up. This allows me to slide the needle under the wart parallel to the skin's surface. I believe, but I have no proof, that Raynaud phenomenon and nail loss or dystrophy results from administering bleomycin deeper than the superficial dermis and/or in too great a quantity. I limit the amount of bleomycin to 0.5 mL per visit and can treat as many as 15 to 20 warts, depending on size, with this amount. On average, 0.1 to 0.3 mL is used for a typical treatment session. Two of my patients have developed nail dystrophy, which resolved spontaneously, and both patients requested bleomycin when other periungual warts required treatment. One patient developed some cold sensitivity in a toe but was not bothered by it.

In summary, I believe that bleomycin is underutilized by dermatologists. It is relatively easy to learn the proper technique; a single vial will treat several warts; and side effects can be minimized when used with care. Pregnant females, uncooperative children, and needle-phobic patients should not be treated with bleomycin; these exceptions notwithstanding, bleomycin is great for thwarting warts.

Sincerely,
Martin S. Horn, MD
Fairfax, Virginia

The author reports no conflict of interest.

REFERENCE

1. Shelley WB, Shelley ED. Intralesional bleomycin sulfate therapy for warts. a novel bifurcated needle puncture technique. *Arch Dermatol*. 1991;127:234-236.

Author Response

I thank Dr. Horn for commenting on our article and sharing his impressive clinical experience. He is correct to emphasize the amazingly insightful and clever contributions of Walter B. Shelley, MD, PhD, and

E. Dorinda Shelley, MD,¹ for the treatment of warts using intralesional bleomycin sulfate uniquely.

In 1987, Shelley and Shelley² commented: "Extremely recalcitrant warts, especially around the fingernails, may require the current darling of wart therapy, intralesional bleomycin." Using a bifurcated beveled vaccination needle, Shelley and Shelley¹ reported in 1991 that they were able to impregnate entire warts with bleomycin sulfate, injecting less than one tenth the amount usually used with a tuberculin syringe. In their study, they had excellent results with 258 warts in 66 patients; and, after their study, an additional 66 patients with single and multiple warts treated with bleomycin had a similarly favorable response. Also, Shelley and Shelley¹ and Epstein^{3,4} noted that some patients had mild pain for 1 to 2 days and warned that bleomycin may cause persistent Raynaud phenomenon, permanent nail dystrophy, and nail loss when injected into fingers intradermally. In addition, Shelley and Shelley¹ found that some warts, such as digitate, penile, and eyelid warts, as well as large condylomata, were not suitable for this therapy. They recommended that the bifurcated beveled vaccination needle puncture technique be considered for use with other wart therapies such as podophyllum resin.¹

I wonder if Dr. Horn has employed bleomycin sulfate with other wart remedies or to treat keratoacanthomas as Shelley and Shelley¹ suggested. In any event, Dr. Horn's excellent results with his modification of the Shelley and Shelley method are noteworthy and appreciated.

Sincerely,
Camila K. Janniger, MD
Newark, New Jersey

The author reports no conflict of interest.

REFERENCES

1. Shelley WB, Shelley ED. Intralesional bleomycin sulfate therapy for warts. a novel bifurcated needle puncture technique. *Arch Dermatol.* 1991;127:234-236.
2. Shelley WB, Shelley ED. *Advanced Dermatologic Therapy.* 1st ed. WB Saunders; Philadelphia, Pa: 1987.
3. Epstein E. Persisting Raynaud's phenomenon following intralesional bleomycin treatment of finger warts. *J Am Acad Dermatol.* 1985;13:468-471.
4. Epstein E. Intralesional bleomycin and Raynaud's phenomenon. *J Am Acad Dermatol.* 1991;24:785-786.