

Response to Article: Postoperative Wound Care After Dermatologic Procedures: A Comparison of 2 Commonly Used Petrolatum-Based Ointments

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I read with great interest the original article entitled "Postoperative Wound Care After Dermatologic Procedures: A Comparison of 2 Commonly Used Petrolatum-Based Ointments," by Adisbeth Morales-Burgos MD, Michael P. Loosemore MD, and Leonard H. Goldberg MD, published in the February 2013 JDD.

As a Mohs surgeon, I agree that maintaining a moist environment is paramount in postoperative wound care. It is best to avoid antibiotic ointments, such as neomycin and bacitracin, which are known to cause allergic contact dermatitis. Routine use of topical antibiotics after Mohs surgery on the face is not necessary for the prevention of infection and may, in fact, contribute to rising rates of antibiotic resistance.

In their study, the authors attempt to compare two petrolatum-based ointments – plain white petrolatum (Vaseline) vs Aquaphor Healing Ointment (AHO), containing petrolatum, humectants, and natural barrier lipids). They conclude that the AHO treated suture lines had a higher incidence of wound redness and swelling, most likely as a result of contact dermatitis. I find this study has numerous shortcomings and their conclusion may, in fact, be flawed for the following reasons:

1. Their sample size was very small – only 27 patients used AHO and 32 patients used plain petrolatum. Certainly, further studies need to be done with a much larger patient population before any truly statistically significant conclusions can be drawn.
2. The facial wounds in this study were "cleaned" daily with water alone – no gentle liquid cleanser was used. This is not reflective of the general custom and practice of most Mohs surgeons. The water alone may not be sufficient to "clean" the skin, resulting in higher levels of bacterial colonization responsible for erythema and swelling.
3. The redness and swelling may have more to do with other factors and cannot simply be attributed to "most likely a result of contact dermatitis." In fact, there was no

documentation of any blisters, or vesicles noted. No patch testing was performed to support this conclusion. No bacterial cultures were done to rule out low-grade infection as a cause of erythema. No attempt was made to measure, grade, or rate the degree of erythema. Perhaps the erythema was part and parcel of normal wound healing. In fact, inflammation is present in the earliest stages of all wound healing. Perhaps the redness and swelling had more to do with the tension on the skin, the choice and reactivity of suture material (eg nylon vs prolene vs silk), the thickness of suture material (4-0 vs 6-0), the use of subcutaneous suture, the type of closure (flap vs linear), the length of repair (long vs short suture line) and the specific location on the face (nose vs lower eyelid).

4. Perhaps the erythema was attributable to a primary irritant dermatitis. After all, sutures are foreign bodies; the longer they are allowed to stay in, the more reactive the surrounding skin. The authors state that all wounds were evaluated at an average of 10.9 days post-op. But when exactly were the sutures taken out? The longer the sutures were allowed to stay in the skin, the greater the chance for inflammation.
5. The authors do not comment on how randomization was conducted. Did they account for Fitzpatrick skin type, age, or sex of their subjects? Clearly, a thin-skinned woman with Fitzpatrick type I skin is more prone to visible erythema than a Fitzpatrick type IV male with thicker skin.

Certainly, further study that enrolls a much larger population and controls for many of the variables mentioned above is warranted before any definitive conclusions can be reached regarding the best petrolatum-based ointment. Furthermore, it is erroneous to conclude that the wound reactivity with redness and swelling is likely due to contact dermatitis with lanolin as the culprit without definitive patch testing.

Disclosures

The author is on the advisory board of Beiersdorf Inc.

Reference

1. Morales-Burgos A, Loosemore M, Goldberg L. Postoperative Wound Care After Dermatologic Procedures: A Comparison of 2 Commonly Used Petrolatum-Based Ointments. *J Drugs Dermatol*. 2013; 12(2):163-164.