The Phenol–Croton Oil Peel Was Originally Investigated in the 1980s

David L. Larson, MD, FACS, George J. Korkos
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Dr. Larson Responds:

On behalf of Drs. Karmo and Hetter, I would like to thank Dr. Brody for providing references to the two previously published articles by Dr. Stegman.

In our abstract, we stated that there were “no animal studies to confirm [the previous] clinical observations” of Dr. Hetter, our coauthor, thereby establishing the purpose of our animal study. As might be inferred from our paper, we did not claim to be the first animal model of the histologic changes to the application of phenol or other abrasive agents. Regardless, it should be noted that Dr. Stegman’s study did not use a minipig, but instead used a 500-g guinea pig; our swine model, as noted in our paper, has skin characteristics that more closely resemble human skin and is therefore a more valid animal model.

In the 1980 Stegman reference, there are no conclusions regarding the effects of croton oil per se, but rather the observation that “injuries after peels were proportional to the concentration of the acid used” (50% phenol, 50% trichloracetic acid [TCA], 25% TCA).

In his 1982 paper in Aesthetic Plastic Surgery, Stegman reported on human skin biopsies from a patient volunteer following the application of 60% TCA, 100% phenol, Baker’s phenol solution, and dermabrasion. The results paralleled his earlier findings in guinea pigs. Interestingly, Stegman’s guinea pig findings preceded his own human work, while Hetter did his studies on a human “volunteer” first, followed by our animal study.

Of course, our more recent studies were more definitive and have greater clinical application because of the identification of the fact that croton oil is not only the active agent in Baker’s formula, but also that titration of the concentration of croton oil makes it particularly useful and safe for application in different parts of the facial and neck skin.

Again, we do thank Dr. Brody for providing references of Stegman’s early work. Although they were not cited in our original paper, they are now dutifully referenced by means of our exchange of letters.

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Disclosures

The author has no disclosures with respect to the contents of this letter.

Reference