Segmental phenol–Croton oil chemical peels for treatment of periorbital or perioral rhytides

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SURGICAL CHALLENGE

Rejuvenation of deep rhytides of the perioral and periorbital areas often requires ablative laser devices, which can be cost prohibitive and might not deliver definitive results.

SOLUTION

A segmental chemical peel with phenol-Croton oil 0.1%-1.6% is safe and effective for correction of rhytides in the perioral and periorbital areas.[1] It is common for these areas to be more heavily wrinkled compared with the rest of the face. To achieve additional photo-rejuvenation of the remaining facial cosmetic units, these areas can be peeled with a medium-depth peel, such as with Jessner solution plus trichloroacetic acid or dry ice CO_2 plus trichloroacetic acid. Compared with the cost of laser devices, the cost of these peels is miniscule.

Cardiac monitoring is not required when using deep chemical peels for 1 or 2 facial cosmetic units of a body surface area <1% if each area is peeled within 10-15 minutes with proper application and no over coating. Analgesia can be achieved with nerve blocks. Oral benzodiazepines can be used to control anxiety. Oral hydration before and after the procedure is important.

Deep chemical peels produce long-lasting neocollagenesis. Even on histology 15-20 years later, a distinct band of healthy dermis is evident in contrast with deeper sun-damaged dermis.[2] The authors treated a series of 639 patients with deep segmental peels (supplies purchased from Delasco, Council Bluffs, Iowa) on only 1-2 areas of their faces, and no cardiac events were noted and satisfactory cosmetic results were achieved (Fig 1, *A-C*).

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Fig 1. A, A 48-year-old female patient with perioral and periorbital rhytides at baseline. **B**, Patient with white frost shortly after application of Jessner solution plus trichloroacetic acid 35% to forehead, cheeks, and nose. Hetter's formula containing 1.1% croton oil and 33% phenol was applied to the perioral area and glabella of patient ~30 minutes before the photograph was taken. Endpoint epidermolysis of the perioral segment and glabella indicate a relatively deep peel. The periocular segment had not yet been treated. **C**, The 48-year-old female patient 6 months after application of Hetter phenol 33% and Croton oil 1.1% to perioral area and glabella. Patient also had Hetter phenol 27.5% and Croton oil 0.1% applied to her eyelids. The rest of her face was treated with Jessner solution plus trichloroacetic acid 35%.

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