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Dressing for success after laser treatments:
'smart' bandages boost healing, ease pain

By Barbara J. Rutledge, Ph.D.

Dressing for Success After Laser Treatments: 'Smart' Bandages Boost Healing, Ease Pain

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STAFF CORRESPONDENT

Richmond, Va. — Because a clean, moist environment is important for optimum wound care, prevention of infection, and hastening of re-epithelialization, the Silon-TSR membrane placed directly on facial skin after laser resurfacing fosters healing with significant reduction of post-operative pain in many cases, according to Joseph Niamtu III, D.M.D., an oral and maxillofacial and cosmetic facial surgeon in private practice here.



Dr. Niamtu

Silon-TSR (Bio Med Sciences, Inc.) is a transparent, silicone-based wound dressing that is marketed as a temporary skin replacement. Although it is non-adherent and can be repositioned, it clings easily to the wound surface. The dressing allows oxygen influx but is resistant to water, creating a moist environment to promote wound healing but allowing water vapor and CO₂ to leave the wound. The transparent nature of the dressing allows the surgeon to visualize the wound to assess healing.

Silon biopolymer

After the laser resurfacing procedure, Dr. Niamtu applies the Silon biopolymer and retains it with a tube gauze net bandage (Surgilast Tubular Elastic Dressing Retainer, Western Medical, Ltd.). The lasered surfaces not covered by the Silon are coated with Elta Renew, a melting petrolatum product (Medwing, Inc.).

"Intolerable pain is extremely rare with this type of membrane, and in many cases patients do not even require post-operative analgesics," Dr. Niamtu says. Although many practitioners leave the Silon in place for up to five days, Dr. Niamtu prefers to remove it at 48 hours and allow the patients to shower and wash their hair with Cetaphil Cleanser (Galderma Laboratories). The following day he begins cleansing the lasered skin with Cetaphil Cleanser. The patient begins gentle hand washing of the lasered skin every 12 hours.

After the Silon is removed, the patient uses Elta Renew continuously until day five or six. The patient is then switched to Elta Light (Medwing), a cream-based light moisturizer, until re-epithelialization is complete. For the rare patient who has significant pruritus or local inflammation, Dr. Niamtu says he may elect to also use Temovate Ointment (clobetasol propionate 0.05 percent, GlaxoSmithKline), a topical steroid, for several days to soothe itching or inflammation. The short-term use of topical steroids has not caused any significant problems in these patients.



After the laser resurfacing procedure, Dr. Niamtu applies the Silon biopolymer and retains it with a tube gauze net bandage (Surgilast Tubular Elastic Dressing Retainer, Western Medical, Ltd.). Photographs courtesy of Joseph Niamtu III, D.M.D.



Lasered skin covered by Silon-TSR dressing shows a clean, smooth, healthy wound. Note the difference in healing between areas covered by the Silon and those that were not protected, which present with serous crusting, increased debris, and inflammation, Dr. Niamtu says.

Lasered skin covered by Silon-TSR dressing shows a clean, smooth, healthy wound. "To appreciate the impact of Silon-TSR on wound healing, note the difference in healing between the areas that had been covered by the Silon and those that were not protected," Dr. Niamtu says. "Areas not covered present with serous crusting, increased debris and inflammation and pain."

Patient compliance

As with all wound care, patient compliance is essential. Even the most intelligent and capable patients can fail to follow the surgeon's instructions regarding post-operative wound care. With

poor patient compliance, healing problems can arise that affect the final cosmetic results.

"Serous crusting and dirty wounds are a prescription for disaster," Dr. Niamtu says. "One patient presented on the fourth day after laser resurfacing, having completely disregarded proper wound care. Intense wound debridement was necessary. Although the final result was not compromised in this case, this type of wound environment is an excellent culture medium for bacteria, yeast and viral infections." **CST**

Dr. Niamtu reports no conflicts of interest with any manufacturers named in this article.