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Innovative treatment option for moderate-to-severe generalized psoriasis: Using 308-nm excimer laser, clobetasol spray, and calcitriol ointment

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Objective: Psoriasis is a skin disease affecting close to 3% of the United States population. Treatment of localized plaque-type psoriasis with the excimer laser has proven to be an effective and safe treatment because it allows for the delivery of higher dosimetry UVB light to the localized plaques. The increased dosimetry is possible because the excimer laser targets only the psoriatic plaques whereas the standard phototherapy targets the full body, both psoriatic and non-psoriatic skin. This study seeks to determine the efficacy and safety of excimer laser treatment in patients with generalized psoriasis.

Methods: A total of 30 patients with generalized psoriasis, as defined by over 10% body surface area involvement with moderately confluent plaques, were enrolled in the 12-week study protocol. Treatments with the excimer laser were performed twice a week for up to 12 weeks. Additionally patients used adjunct topical clobetasol spray and calcitriol ointment alternated every 4 weeks. We followed the induration protocol for initial dosimetry of the laser. This protocol includes skin type and plaque induration characteristics to determine initial dose. We also used the erythema and burn protocol for dosimetry changes on each visit. This protocol uses the time and amount of erythema and blistering from previous treatments to determine dosimetry changes on subsequent visits.

Results: Interim results reveal 80% of patients receiving excimer laser for generalized psoriasis achieved PASI 75 after 12 weeks of treatment. However, one case showed a patient who suffered both mild and significant burning upon following the erythema and burn protocol. The patient continued to suffer significant burning after decreasing the dose by 15% as stated on the protocol.

Conclusions: Treatment of generalized psoriasis in combination with topical treatment with the excimer laser is both efficacious and safe. However, there is a need for a new protocol for dosimetry in the management of erythema and blistering, which considers the variety of sensitivities seen in generalized psoriasis patients as compared to the initial protocol made for recalcitrant, localized plaque psoriasis.

Biography

Monica Huynh is a medical student at Chicago College of Osteopathic Medicine. She is working with Dr. John Koo, MD, Professor and Vice Chairman of University of California, San Francisco Department of Dermatology. She is the author and co-author of original papers, abstracts, and chapters.

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