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NOTABLE NOTES

Revisiting the History and Importance of Phototherapy in Dermatology

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Practicing dermatologists today are using phototherapy to treat psoriasis, vitiligo, atopic dermatitis, and many other common and uncommon dermatoses. Treatments like narrowband UV-B (NB-UV-B), psoralen plus UV-A (PUVA), UV-A-1, and excimer laser are now in the armamentarium of today's dermatologist.[1] But when did the use of phototherapy in treating skin disease actually begin?

Surprisingly, the history of phototherapy dates back more than 3500 years. The ancient Egyptians treated vitiligo with sunlight or "heliotherapy" and the addition of ingested plants extracts from *Ammi majus*, a weed that grew along the Nile Delta. Ancient Hindus treated "leukoderma" with the ingestion of seeds from *Psoralea corylifolia* and sunlight.[2] Major advances weren't seen until 1896, when Finsen began to study the effects of a "chemical rays" lamp on patients with lupus vulgaris. He was awarded the Nobel Prize in medicine in 1903 for "recognition of treatment of lupus vulgaris, with concentrated light rays."[2] In 1923, Goeckerman used a high-pressure mercury lamp to produce artificial broadband UV-B plus coal tar to treat psoriasis. In 1947, the active ingredients from the extract of *Ammi majus* were discovered, eventually leading to the discovery of PUVA therapy for psoriasis in 1974.[3] Soon thereafter, NB-UV-B was found to be more effective than previous treatments with broadband UV-B in the treatment of psoriasis.[1] More recently, targeted phototherapy, such as the excimer laser, was introduced for the treatment of psoriasis in 1997 and now is being used in other conditions such as vitiligo. UV-A-1 has been used to treat acute flares of atopic dermatitis, cutaneous mastocytosis, and morphea since the 1990s.[1] In the past decade, daylight photodynamic therapy has been used for field treatment of actinic keratoses.

Dermatologists are at the forefront of innovation for phototherapy treatment regimens of cutaneous disorders. Phototherapy continues to be a safe and cost-effective treatment option for many dermatoses. In patients with psoriasis, Psoriasis Area and Severity Index-75 scores after UV-B and PUVA therapy 3 times weekly for 6 to 12 weeks were 70% and 80%, respectively. This improvement was comparable or superior to biologic agents without the risks associated with systemic medications.[1] The major drawbacks of phototherapy include time commitment, accessibility, and insurance coverage; however, home phototherapy addresses most of these issues, except insurance coverage.[1] Given the rich history, high efficacy, and practical application of phototherapy, dermatologists should continue to use phototherapy in practice and train future dermatologists about the role of this excellent treatment modality.

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