

Skin Care 2019: Comparison of the Therapeutic Effects of UVB and PUVA Therapy in Patients with Vitiligo Referred to BOUALI Hospital and MEHREGAN Laser Center- Marjan Entezami- Shankarrao Mohite College, India

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Background: Vitiligo is a common pigmentary disorder with great cosmetic and psychological morbidities. Although many treatment modalities have been tried for the treatment of vitiligo, none is uniformly effective. PUVA (Psoralen Ultra Violet A) is established as efficacious treatment for vitiligo. Recently, narrow band UVB (NB-UVB) has been reported to be an effective and safe therapeutic option in patients with vitiligo. In this study, patients with vitiligo divided into two groups that were treated either with UVB or PUVA therapy modalities and the efficacy, the time required for repigmentation, stability of repigmentation and adverse effects were compared in two groups.

Methods: A clinical trial has been performed on 60 patients with vitiligo referred to BOUALI hospital and MEHREGAN laser center in 1392 and treated with UVB and PUVA therapy methods. In first group that were treated with PUVA (30 patients), oral tablets containing 8-methoxypsoralen at a dose of 25 mg/m² were taken three hours before phototherapy and PUVA therapy was started at a dose of 0.5 J/cm² twice a week. What are the different types of PUVA therapy: The most common form of therapy combines 8-methoxypsoralen taken by mouth followed 45-60 minutes later by exposure of the skin to UVA. Less commonly, the drug is applied topically (the medication is occasionally diluted in bathtub water in which the patient is immersed) and then after a few minutes the ultraviolet exposure occurs. How effective is PUVA therapy PUVA is a safe and effective treatment for psoriasis. Recently, a newer treatment has supplanted it to some extent, utilizing a different wavelength of light called "narrow band UVB." Although a visit to a physician's office is still necessary to administer the light, it is not necessary to take a drug by mouth. Both types of treatments are similar in their effectiveness. PUVA is also useful in the treatment of cutaneous T-cell lymphoma, mycosis fungoides, and certain difficult cases of atopic dermatitis. Extracorporeal photophoresis is a variation of PUVA where a portion of the patient's white blood cells are removed and then mixed with a psoralen preparation prior to exposure to a UVA source in a machine external to the body. These treated cells are then infused back into the patient. This type of treatment is effective for patients with Sézary's syndrome, a type of leukemic mycosis fungoides, as well as graft vs. host disease. The phototherapy dose was increased by 20% in each visit if tolerated. In second group(30 patients), UVB therapy was

administered twice a week with 311-313 nm wavelength and a dose of 0.1 J/cm² and we increased the dose 20% in each visit if tolerated. Phototherapy sessions in both groups were 15. In patients treated with PUVA, 40% were male (12 patients) and 60% were female (18 patients). In UVB group 43.3% were male (13 patients) and 56.7% were female (17 patients). The mean age in PUVA- treated group is 34 years and in UVB treated group is 32.1 years. There was no statistically significant difference on comparing mean age in both groups.(p=0.13). Type of vitiligo in patients treated with PUVA was 56.7% generalized, 30% segmental and 13.3% focal, and in patients treated with UVB was 56.7% generalized, 33.3% segmental and 10% focal.

Result: In the PUVA- treated group three month after treatment, two patients showed complete repigmentation (6.7%), five patients showed excellent repigmentation (16.7%), 17 patients showed good repigmentation (56.7%), four patients showed moderate repigmentation (13.3%), one patient showed mild repigmentation (3.3%) and one patient showed no improvement (3.3%). In the UVB- treated group three month after treatment, six patients showed complete repigmentation (20%), 13 patients showed excellent repigmentation(43.3%), eight patients showed good repigmentation (26.7%), two patients showed moderate repigmentation (6.7%). One patient showed mild repigmentation (3.3%). In this study ,there was statistically significant relationship between repigmentation and type of treatment during three and six month so that the efficacy in patients treated with UVB is better than PUVA.

Conclusion: According to this study, using UVB phototherapy is a safe and effective way for treatment of vitiligo in comparison with PUVA phototherapy. To summarize, NB-UVB phototherapy and PUVA photochemotherapy are both invaluable treatments to have available in any dermatology department and should be prioritized, not only for psoriasis, but in a variety of other inflammatory and proliferative skin diseases, including atopic eczema. Treatment can be safely and easily administered and is well tolerated with few adverse effects. Excellent disease remission may be achieved, whilst sparing the use of other potentially toxic drugs at a relatively early stage in a patient's journey. Head-to-head comparative monotherapy studies with biologic therapies do not exist and are needed. Due to the relative cost-efficacy of the

phototherapies and the understanding of their long-term safety profiles compared with the cost and less lengthy follow-up for the biologics, these should be employed prior to consideration of biologic treatments . As with any therapy, standardization of optimized treatment regimens, careful observation of treatments delivered and therapeutic outcomes, adverse effects and long-term follow-up studies, including determining any skin cancer risk, are essential. The development of the National Managed Clinical Network for Phototherapy has had a major impact on standardization, safety, and vigilance in delivery of our phototherapy practices in Scotland and has proved to be an invaluable tool, enabling the place of NB-UVB, and PUVA therapies to continue to be well-established in the treatment of skin disease