

SCIENTIFIC PAPER – ABSTRACT

Vitiligo Treatment with Monochromatic Excimer Light and Tacrolimus: Results of an Open Randomized Controlled Study

Nistico S., Chiricozzi A., M.D., Rosita Saraceno R., Schipani C., Chimenti S. - *Photomedicine and Laser Surgery (PLS)* (2012)

Background data. Narrow band ultraviolet B (UVB) is an effective and safe option for the treatment of vitiligo. However, a complete and long-lasting repigmentation of vitiligo patches is difficult to achieve. Combined treatments with novel sources of phototherapy and topical agents represent possible new strategies.

Objective: The purpose of this study was to compare the efficacy of combined tacrolimus and 308-nm excimer light (MEL) vs 308-nm MEL monotherapy in treating vitiligo in a controlled study. **Methods:** Fifty-three patients affected by vitiligo were enrolled in this open prospective study. Patients were divided into three groups: Group I included 20 patients treated with MEL 308nm twice weekly and oral vitamin E; Group II included 20 patients treated with MEL 308nm twice weekly combined with 0.1% tacrolimus once a day and oral vitamin E; and Group III included 13 patients treated only with oral vitamin E. **Efficacy** was assessed at the end of 12 weeks based on the percentage of repigmentation. **Results:** Fifty-two patients completed 12 weeks of treatment. Group I (MEL + vitamin E) showed a moderate repigmentation in 35% of patients, good repigmentation in 30%, excellent repigmentation in 25%, and poor repigmentation in 10%; Group II (MEL + tacrolimus 0.1% + vitamin E) presented moderate repigmentation in 25% of patients, good repigmentation in 40%, excellent repigmentation in 30%, and poor repigmentation in 5%; Group III (vitamin E) showed moderate repigmentation in 16% and 84% did not show signs of repigmentation.

Conclusions: Our results demonstrate that the combination treatment of 0.1% tacrolimus ointment plus 308-nm MEL and 308-nm MEL monotherapy are effective, safe, and well tolerated for the treatment of vitiligo compared to treatment with vitamin E. Furthermore, this study suggests that an association with topical immunomodulators could enhance the clinical response in vitiligo, especially in more resistant anatomical sites.

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Photo(chemo)therapy for vitiligo

Pacifico A., Leone G. - *Photodermatology, Photoimmunology & Photomedicine (PPP)* (2011)

Vitiligo is a common skin disease characterized by loss of normal melanin pigments in the skin and its pathogenesis is still unclear. Treatment modalities include psoralen plus ultraviolet A, narrow-band ultraviolet B (NB UVB) phototherapy, topical and systemic steroids, topical calcineurin inhibitors, topical vitamin D analogues in monotherapy or in association with phototherapy, and surgical treatment. NB UVB (310–315 nm) radiation is now considered as the 'gold standard' for the treatment of diffuse vitiligo, and treatment with two recently introduced UVB sources that emit 308 nm wavelengths, the 308 nm xenon



chloride (XeCl) excimer laser and the 308 nm XeCl excimer light, has also been reported to be effective and might be the treatment of choice for localized disease: this treatment modality has been defined as 'targeted phototherapy.'

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Monochromatic excimer light 308 nm in monotherapy and combined with topical khellin 4% in the treatment of vitiligo: a controlled study

Saraceno R., Nisticò SP, Capriotti E., Chimenti S. - *Dermatologic Therapy (DT)* (2009)

Vitiligo is an acquired depigmentation disorder affecting 1–4% of the world's population. Conventional therapies include steroids, photosensitive topical agents, surgical treatments, and phototherapy. The aim of the study was to evaluate the efficacy of monochromatic excimer light 308 nm (MEL), both as a monotherapy and in combination with khellin 4% ointment in vitiligo. Forty-eight patients (36 male and 12 female) affected with vitiligo were enrolled in this open prospective study. Patients were selected and divided into three groups: group I included 16 patients treated with MEL 308 nm once-weekly and oral vitamin E; group II included 16 patients treated with MEL 308 nm once weekly combined with khellin 4% ointment (MEL-K) and oral vitamin E; group III (control group) included 16 patients treated only with oral vitamin E. Efficacy was assessed at the end of 12 weeks based on the percentage of repigmentation. Group I (MEL-group) showed a moderate repigmentation in 2/16 (12.5%) patients, good repigmentation in 10/16 (62.5%), and excellent repigmentation in 4/16 (25%) patients. Group II (MEL-K group) presented moderate repigmentation in 2/16 (12.5%) patients, good repigmentation in 5/16 (31.25%), and excellent repigmentation in 9/16 (56.25%). Group III (control group) showed a moderate repigmentation in 3/16 patients (18.75%), a good repigmentation in 1/16 (6.25%) patient, while 10/16 (62.5%) patients did not show signs of repigmentation. The clinical response achieved in group I and II was higher compared with group III (control group) without showing significant differences. MEL 308 nm, alone and/or combined with khellin 4% offered encouraging results and it may be considered a valid therapeutic option worthy of consideration in the treatment of vitiligo.

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308 nm monochromatic excimer light (Excilite -) in the treatment of alopecia areata.

Hara H., Ishii Y.,- *The Journal of Japanese Society for Dermatologic Surgery (JSDS)* (2009)

The 308-nm excimer light has been reported to be safe and effective in the treatment of chronic skin disease, such as psoriasis vulgaris and vitiligo vulgaris. Our object was to analyze the efficacy of a novel non laser 308-nm monochromatic excimer light (MEL) delivery system for the treatment of alopecia areata. Ten patients were enrolled in this study. Treatment were scheduled weekly with the MEL. Regrowth of hair over 75% of the alopecia area was observed in 5 of 10 patients. Two of 10 patients showed complete regrowth of hair. Common side-effects included intense erythema, hyperpigmentation, and a burning sensation, but these were well tolerated. Our preliminary results showed that 308-nm excimer light is an effective and a safe therapeutic option for alopecia areata.

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Different Applications of Monochromatic Excimer Light in Skin Diseases

Nistico` S.P., Saraceno R., Schipani C., Costanzo A., Chimenti S. - *Photomedicine and Laser Surgery* (PLS) (2009)

Background. Ultraviolet radiation has been used for curative purposes in dermatologic conditions, especially in the last 30 years. Objectives: We analyzed the efficacy of monochromatic excimer light in psoriasis, palmoplantar pustulosis, vitiligo, mycosis fungoides and alopecia areata, and to examine potential new indications.

Methods. Two hundred seventy-nine patients with common and persistent skin diseases were enrolled in an open prospective study: 152 patients with stable and localized plaque psoriasis, 47 with palmoplantar psoriasis, 7 with palmoplantar pustulosis, 32 with vitiligo, 11 with prurigo nodularis, 9 with mycosis fungoides stage Ia, 8 with alopecia, 5 with localized scleroderma, 5 with genital lichen sclerosus, and 3 with granuloma annulare. The 308nm excimer light was used at a power density of 48mW/cm². An average of 12 sessions (range, 6–18), one session per week, was performed and yielded a total dose range of 4–12.5 J/cm². Clinical response was assessed using photos, biopsies, and specific clinical scores. Patients were monitored for 6 and 12 months for psoriasis, 12 months for mycosis fungoides, and 4 months for the remaining conditions. Results: We observed complete remission in more than 50% of patients with plaque psoriasis and palmoplantar dermatoses, respectively, complete remission in all patients affected by mycosis fungoides, excellent repigmentation in one third of vitiligo patients, hair regrowth in three patients with alopecia areata, an overall improvement in prurigo nodularis, a partial remission in patients affected by localized scleroderma, and a complete remission in most of the patients with genital lichen sclerosus and granuloma annulare.

Conclusions. Our study confirms the use of monochromatic excimer light as a valid choice for the treatment of psoriasis, vitiligo, and mycosis fungoides; we also observed and report for the first time that monochromatic excimer light produces a therapeutic response in prurigo nodularis, localized scleroderma, genital lichen sclerosus, and granuloma annulare.

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Monochromatic excimer light (308 nm) in the treatment of prurigo nodularis

Saraceno R., Nistico` SP, Capriotti E., De Felice C., Rhodes L.E., Chimenti S. - *Photodermatology, Photoimmunology & Photomedicine* (PPP) (2008)

Three hundred and eight nanometre excimer light has been reported to be safe and effective in the treatment of chronic skin diseases, but the range of potential applications has not been fully explored. Our objective was to assess the efficacy of monochromatic excimer light (MEL) in the treatment of prurigo nodularis (PN). Eleven patients were enrolled in this pilot study. Patients were treated weekly and an average of eight sessions of MEL was given. Followup was 4 months. Partial or complete clinical and histological remission was observed in all patients who completed the study (81%).

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Treatment of Folliculitis with Monochromatic Excimer Light (308 nm)

Nisticò S., Saraceno R., Carboni I., Chimenti S. – *Dermatology* (2008)

Background/Aims: 308-nm excimer light has been reported to be safe and effective in the treatment of chronic skin diseases. The aim of the study was to prove the efficacy of 308-nm monochromatic excimer light in the treatment of recalcitrant and antibiotic-resistant folliculitis.

Methods: Eight patients affected with folliculitis were enrolled and treated twice weekly with the 308-nm excimer light. The follow-up was 12 weeks from the end of the treatment.

Results: A mean number of 13 sessions (range 10–20) was performed with increasing dosage according to the patient's phototype and response. Remission, in terms of number and infiltration of papulopustular elements, was achieved in all patients after 4–16 therapeutic sessions. At the end of the follow-up period, recurrence of folliculitis was observed in 2 patients.

Conclusions: These results suggest that the 308-nm excimer light is a valid therapeutic option for the treatment of resistant forms of folliculitis especially in difficult-to-treat areas.

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A novel photo-therapeutic approach to chronic skin diseases.

Nisticò SP., Saraceno R., Chiricozzi A., Schipani C., Chimenti S., - *Journal of Plastic Dermatology (JPD)* (2008)

308-nm excimer light has been shown to be safe and effective in the treatment of a variety of chronic skin diseases. Objectives of this study were to analyse the efficacy of MEL in vitiligo, mycosis fungoides and alopecia areata, and to examine the potential new indication of genital lichen sclerosus, prurigo nodularis, localized scleroderma and granuloma annulare. 71 patients with common and persistent skin diseases were enrolled in this study: 32 with vitiligo (generalized and acro-facial type); 11 with prurigo nodularis; 9 with mycosis fungoides (MF) stage Ia, 8 with alopecia (2 universalis and 6 areata), 5 with localized scleroderma, 5 with genital lichen sclerosus, and 3 with granuloma annulare. The 308-nm excimer monochromatic non coherent light was used at a fluence rate of 48 mW/cm² with a maximum irradiation area of 512 cm² at 15 cm from the skin. Starting MED was based on a predetermined MED and subsequent doses according to clinical appearance and treatment response. An average of 12 sessions (from 6 to 18) was performed once weekly (range total dose 4-12.5 J/cm²). Clinical response was evaluated using photographs, biopsies and specific clinical score. Follow up was 6 and 12 months in psoriasis, 12 months in mycosis fungoides and 4 months for all other conditions. We observed complete remission in all patients affected by mycosis fungoides, excellent repigmentation in one third of vitiligo patients, hair re-growth in 3 patients with alopecia areata, an overall improvement in prurigo nodularis, a partial remission in patients affected by localized scleroderma, a complete remission in most patients with genital lichen sclerosus and granuloma annulare. These findings represent an important advance in their treatment suggesting MEL as a valid and new therapeutic option.

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Efficacy of Monochromatic Excimer Light (308 nm) in the Treatment of Atopic Dermatitis in Adults and Children.

Nisticò SP., Saraceno R., Capriotti E., De Felice C., Chimenti S. – *Photomedicine and Laser Surgery (PLS)* (2008)

Objective. To demonstrate the efficacy of light produced by a 308 nm xenon-chloride monochromatic excimer light (MEL) in the treatment of localized lesions of atopic dermatitis (AD) in adults and in children.

Background Data. The 308-nm excimer light has been reported to be safe and effective in the treatment of chronic skin diseases, although the range of potential applications has not been fully explored.

Methods. Twelve adults and six children affected by localized lesions of AD were enrolled in this pilot study and treated with a weekly session of MEL. A range of 6–12 sessions was performed with an increasing dosage according to the patient's phototype and response. Follow-up was for 16 wk.

Results. All patients completed the protocol. At the end of treatment complete remission was observed in 12/18 patients (66.7%), a partial remission in 3/18 (16.7%) and no remission in 3/18 (16.7%). A mean total dose of 21.89 minimal erythematol dose (MED) was performed. Forty-four percent of patients maintained the results achieved at a 16-week follow-up. Treatment was well tolerated overall. **Conclusions:** MEL can be considered as a valid and safe therapeutic option for the treatment of localized AD in adults and children.

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A Pilot Study to Determine the Safety and Efficacy of Monochromatic Excimer Light in the treatment of vitiligo.

Stacy M., Chimento BA, Newland M., Ricotti C., Nistico S., Romanelli P. - *Journal of Drugs in Dermatology (JDD)* (2008)

Background and Objective. According to a European pilot study, the 308-nanometer (nm) Excilite μ TM (DEKA, Florence, Italy) system may be a promising tool for patients with vitiligo by offering targeted phototherapy, a rapid onset of repigmentation, and few adverse effects. The objective of this study was to evaluate the clinical efficacy and safety of the 308-nm Excilite μ in the treatment of vitiligo.

Methods and Limitations. Ten patients with stable vitiligo were exposed to 10 weeks of targeted phototherapy with the Excilite μ device, followed by 5 weeks of observation. Skin types I and II were not included in the cohort, and Wood's light examination was not documented.

Results. At 2 weeks, repigmentation was observed in 60% of subjects, according to patient assessment, and 50% of subjects, according to the treating physician and independent observer assessments. All patients maintained the repigmentation during the 5-week, follow-up period.

Conclusion. The 308-nm Excilite μ is a safe and fast-acting therapeutic option in patients with stable vitiligo and skin types III through VI.

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A 308-nm monochromatic excimer light in the treatment of palmoplantar psoriasis

Nisticò S., Saraceno R., Stefanescu S., Chimenti S. – *Journal of European Academy of Dermatology and Venereology (JEADV)* (2006).

Background. Various reports have shown the efficacy of narrow-band UVB (311–313 nm) and excimer laser (308 nm) in the treatment of psoriasis.

Objective. To prove the efficacy of light produced by xenon-chloride excimer at 308 nm (monochromatic excimer light, MEL) in the treatment of palmoplantar psoriasis (PP).

Methods. Fifty-four patients (29 male and 25 female) affected by PP were treated with MEL every 7–14 days. A mean number of 10 sessions was performed with an increase of the dose depending on patient's skin type and response.

Results. All 54 patients completed the treatment. After 4 months of MEL we observed a complete remission in 31 patients, a partial remission in 13 patients, and a moderate improvement in 10 patients.

Conclusions. These results suggest that MEL can be considered as a valid therapeutic option for treatment of selected forms of PP.

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Evaluation of a novel 308-nm monochromatic excimer light delivery system in dermatology: a pilot study in different chronic localized dermatoses.

Aubin F., Vigan M., Puzenat E., Blanc D., Drobacheff C., Deprez P., Humbert P., Laurent R. - *British Journal of Dermatology* (2005)

Background. Recently, units have been developed that are capable of delivering large fluences of narrowband ultraviolet (UV) B selectively to cutaneous lesions within a reasonable time.

Objectives. To analyse the efficacy of a novel nonlaser 308-nm monochromatic excimer light (MEL) delivery system in various dermatoses usually treated by narrowband UVB phototherapy.

Methods. Fifty-four patients with chronic and resistant localized dermatoses were enrolled in a prospective study: 17 with palmoplantar pustular psoriasis, seven with plaque-type psoriasis, four with nail psoriasis, eight with chronic atopic dermatitis of the hands, 10 with chronic nonatopic dermatitis of the hands and eight with alopecia areata. The 308-nm xenon chloride MEL delivery system (Excilite; DEKA, Florence, Italy) was used to produce an average incident dose rate of 50 mW cm² at a tube-to-skin distance of 15 cm and with a maximum irradiating area of 512 cm². The initial dose was based on multiples of a predetermined minimal erythema dose (MED), and subsequent doses were based on the response to treatment. Treatments were scheduled weekly for a maximum of 10 weeks. Clinical responses were evaluated using photographic documentation and (except for alopecia areata) clinical score.



Results. The MED ranged from 250 to 350 mJ cm² (mean ± SD 318.2 ± 28.4). MEL at 308 nm was the most effective for palmoplantar pustular psoriasis with a mean improvement of 79% after a mean of 5.3 treatments and a mean dose of 11.8 MED per treatment. Plaque-type psoriasis was significantly less sensitive to treatment and nail psoriasis demonstrated no benefit from treatment. Chronic palmar atopic dermatitis was cleared in two patients and the mean improvement was 54% as compared with 46% in patients with chronic nonatopic dermatitis of the hands. Four complete regrowths among the eight patients with alopecia were observed after a mean of 5.1 treatments. The percentages of improvement had significantly decreased at the 6-month visit, and only four patients (24%) with palmoplantar pustular psoriasis still demonstrated a significant improvement. Common side-effects included intense erythema and, more rarely, blisters, but these were well tolerated.

Conclusions. Our preliminary results confirm the efficacy of this novel 308-nm MEL delivery system, which appears to be effective and safe for palmoplantar pustular psoriasis. To a lesser extent, plaque-type psoriasis, chronic atopic and nonatopic dermatitis of the hands and alopecia may also benefit from this treatment.

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Monochromatic excimer light (308 nm) in patch-stage IA mycosis fungoides

Mori M., Campolmi P., Mavilia L., Rossi R., Cappugi P., Pimpinelli N. - *Journal of American Academy of Dermatology (JAAD)* (2004.)

Recently, numerous studies have been reported concerning the treatment of early-stage mycosis fungoides (MF) with narrowband (311-nm) UVB, claiming a beneficial response. We have used for the first time a 308-nm monochromatic excimer light, a new kind of xenon-chloride lamp, in the treatment of patch stage IA MF. We treated 7 patch lesions in 4 patients with unequivocal clinicopathologic diagnosis of MF. All lesions achieved clinical and histologic complete remission. The number of weekly sessions varied from 4 to 11 (mean 6.5; median 5.5). The total UVB 308-nm irradiation dose ranged from 5 to 9.3 J/cm² (mean 7.1 J/cm²; median 7 J/cm²). All lesions remained in stable complete remission after a follow-up of 3 to 28 months. No remarkable side effects were reported. Our preliminary results suggest that monochromatic excimer light phototherapy is a possibly very useful treatment modality in patch stage IA MF.

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Efficacy of monochromatic excimer laser radiation (308 nm) in the treatment of early stage mycosis fungoides

Nisticò S., Costanzo A., Saraceno R., Chimenti S., - *British Journal of Dermatology (BJD)* (2004)

Background. Various reports have recently shown the efficacy of narrowband ultraviolet (UV) B phototherapy at 311 nm in the treatment of early stage mycosis fungoides (MF).

Objectives. To examine the effectiveness and tolerability of monochromatic excimer light (MEL) at 308 nm as a first treatment for early stage MF (stage IA).

Methods. Ten lesions from five patients with a clinical and histological diagnosis of MF were treated with repeated applications of MEL until complete remission was achieved or up to a maximum of 10 applications, with a cumulative dose of 308 nm UVB of between 6 and 12 J cm². All patients were observed every 2 weeks for 2 months, with a 1-year follow-up.

Results. At present, all patients are in complete remission, with no side-effects.

Conclusions. Based on these results, MEL can be considered a useful tool in the treatment of early stage MF.

Monochromatic excimer light (308 nm): an immunohistochemical study of cutaneous T cells and apoptosis-related molecules in psoriasis

Bianchi B., Campolmi P., Mavilia L., Danesi A., Rossi R., Cappugi P. – *Journal of European Academy of Dermatology and Venereology (JEADV)* (2003)

Background. Various types of UVB radiation source (290–320 nm) are used in treating psoriasis and their therapeutic mechanism has been attributed to immunosuppressive properties. Recently, a new UVB source generated by a 308-nm excimer laser has been introduced for the treatment of psoriasis.

Objective. In this study we investigated the immunohistochemical evaluation of T cells and the expression of various apoptosis-related molecules in the psoriatic hyperproliferative skin before and after treatment with 308-nm monochromatic excimer light (MEL).

Methods. Ten patients (three women and seven men), ranging in age from 29 to 79 years, affected by plaque-type psoriasis vulgaris, were treated with MEL. Biopsies from psoriatic lesions of MEL-treated sites were taken before, 24 h and/or 48 h after the first irradiation and analysed by the immunophosphatase alkaline technique (APAAP).

Results. MEL treatment was found to cause a significant decrease in the rate of proliferation of keratinocytes and a relevant depletion of T cells in all psoriatic lesions, 48 h after the first irradiation: 308 nm light eliminated T cells from the psoriatic epidermis and also from the dermis, highlighting the ability of this UVB source to penetrate the skin compared with normal UVB and establish direct cytotoxic action on T cells infiltrating skin lesions. Rapid clearing of psoriatic lesions involves potential molecular targets of UVB in T cells including p53, which is upregulated after direct irradiation with 308-nm UVB. Moreover, Bcl-2 expression in healing psoriasis epidermis after MEL treatment is significantly decreased compared with untreated skin and the TUNEL (TdT-mediated dUTP-biotin nick end labelling) technique revealed the presence of relevant apoptotic keratinocytes in the irradiated epidermis.

Conclusions. These results indicate that psoriatic skin after monochromatic excimer light therapy is associated with significant T-cell depletion and alterations of apoptosis-related molecules accompanied by a decreased proliferation index and clinical remission.

Monochromatic excimer light 308 nm in the treatment of vitiligo: a pilot study

Leone G., Iacovelli P., Paro Vidolin A., Picardo M. – *Journal of European Academy of Dermatology and Venereology (JEADV)* (2003)

Objective. To study the efficacy and safety of monochromatic excimer light (MEL) on 37 vitiligo patients referred to our clinic.

Methods. In a pilot study, 37 patients (17 males, 20 females) with acrofacial (n = 21), focal (n = 11), segmental (n = 1), and generalized (n = 4) vitiligo were treated twice weekly with MEL for a maximum period of 6 months.

Results. Thirty-five patients (95%) showed signs of repigmentation within the first eight treatments. The treatment resulted in good repigmentation in 16 patients, and excellent repigmentation in 18 patients. Adverse events were limited to transient erythema. In addition, some patients (n = 3) not responding to prior narrow-band UVE (NH UVE) phototherapy showed good results with MEL in our series.

Conclusions. Treatment with 308 nm MEL for vitiligo may be more effective in obtaining rapid repigmentation than phototherapy with NH UVE. The results in this study are similar to those recently reported with a 308 nm excimer laser, but 308 MEL could present some advantages: the possibility of treating larger areas compared to the 308 nm excimer laser, with shorter treatment times and better patient compliance. The overall good results and the early appearance of repigmentation contribute to reducing the cumulative exposure to UV radiation.

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308 nm Monochromatic Excimer Light for the Treatment of Palmoplantar Psoriasis

Campolmi P., Mavilia L., T.M. Lotti T.M., Rossi R., Brazzini B., J. Hercogova, Cappugi P. – *International Journal of Immunopathology and pharmacology (IJIP)* (2002)

Palmoplantar psoriasis (PPP) presents with typical scaly patches sometimes studded with sterile pustules. It is chronic, very resistant to treatment and can lead to severe disabilities. Monochromatic Excimer Light (MEL) is a UVB radiation (308 nm) generated by a new light source and is used for the first time in the treatment of this disorder. Eleven patients affected by PPP were treated for 10 weeks using MEL @ 308 nm (Excilite DEKA - Florence - Italy), with maximum irradiating area of 512 cm². At the end of the six-week treatment all patients showed an improvement varying from 75% to 100%. No relapse was noted at the 16-week follow-up. At the 12-week post-treatment observation one patient showed only some scaly elements on palms. In contrast to traditional ultraviolet phototherapy, MEL clears PPP very quickly and it can be used without any drug association therapy. Compared to excimer laser, MEL, a sealed-off device with a maximum irradiating area of 512 cm² offers several advantages especially in the treatment of medium-large psoriatic areas such as palms and soles.

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The Code of Excellence

Established Treatments for Psoriasis. A Critical Review

T.M. Lotti T.M., J. Delescluse J., Hercogova J. – *International Journal of Immunopathology and pharmacology (IJIP)* (2002)

Psoriasis is a chronic, genetically-determined disease, characterized by an immuno-mediated pathogenesis. Treatment is based on symptomatic therapy that is able to induce remission of the disease and therefore make such a condition more acceptable for the patients. However, no therapy is yet able to induce a permanent remission of psoriasis. A large number of treatment options are now a days available, and the choice depends on the extension and severity of the disease. We will review the most safe and effective treatments for this debilitating disease, trying to highlight the most common side effects associated with each treatment, which should help in determining options for therapy.

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308 nm Monochromatic Excimer Light in Psoriasis: clinical evaluation and study of cytokine levels in the skin.

Cappugi P.,Mavilia C.,Mavilia L., Brazzini B., Rossi R., J. Hercogova J., Lotti T.M., Campolmi P., Andreasi L. - *International Journal of Immunopathology and pharmacology (IJIP)* (2002)

Ultraviolet light (UVB, 290-320 nm), and in particular light at 308-311 nm, represents an effective therapeutic modality for psoriasis and other immunomediated skin disorders. In fact, its therapeutic mechanism has been attributed to immunosuppressive properties in the skin. Alterations that affect cytokine network related to the abnormal level and activities of T lymphocytes in the altered skin, are considered fundamental today in the pathogenesis of the disease. The aim of our study is to evaluate clinical aspects and cytokine levels in the skin before and after treatment with a 308-nm Monochromatic Excimer Light (Excilite DEKA – Florence - Italy) in psoriatic patients. At 3-month follow-up clearance of treated lesions is still evident.

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