



LASERS

## OBSERVATION REPORT ON THE CLINICAL EFFICACY OF TREATMENT FOR VITILIGO USING TRANSDERMAL ADMINISTRATION BY CO<sub>2</sub> FRACTIONAL LASER

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**Objective:** To observe the efficacy of combination therapy for vitiligo, which consists of CO<sub>2</sub> fractional laser and medicines.

**Method:** 60 vitiligo patients with a total of 130 pieces of rashes were randomized into five groups receiving different treatments and each group divided into three subgroups according to the involving body areas. All groups received CO<sub>2</sub> fractional laser combined with immediate topical diprospan once a month and different groups received different topical medicines during the interval period. Except control group, the remaining four groups respectively topically applied 1% pimecrolimus(group 1), 1% pimecrolimus and tacalcitol(group 2), tacalcitol and eloson(group 3) or 1% pimecrolimus and tacalcitol and eloson(group 4) twice a day. All the patients were told to increase the dose of topical medicines before wound healing and simultaneously take oral medicines during the interval period. The efficacy was evaluated by the ratio of repigmentation.

**Results:** Response in the combination therapy group was superior to that in the control group. The efficacy of group 2,3,4 was significantly better than group 1. There was no statistical difference between group 2 and group 3. Group 4 showed higher ratio of repigmentation than group 2,3 and the difference was statistically significant. Though there were some adverse reactions during the treatment, including erythema and vesicles, they were endurable and could spontaneous remission.

**Conclusion:** It is a highly effective therapy for vitiligo to use transdermal administration by CO<sub>2</sub> fractional laser. Holes formed by CO<sub>2</sub> fractional laser help transdermal absorption of topical medicines. Therefore, the more topical medicines are applied before the holes healing, the better efficacy is achieved. In addition, the treatment efficacy of vitiligo on the neck, trunk and limbs is better than that of the hands and feet.

