

ASIA-PACIFIC DERMATOLOGY AND COSMETOLOGY CONFERENCE

AUGUST 16-17, 2018 TOKYO, JAPAN

Fractional CO₂ laser pretreatment to autologous hair transplantation and phototherapy improves perifollicular repigmentation in refractory vitiligo: A randomized, prospective, half-lesion, comparative study

Amir Feily

Jahrom University of Medical Sciences, Iran

Background: Fractional CO₂ laser and autologous hair transplantation are independently effective in the treatment of refractory and stable vitiligo.

Objective: The author's purpose was to evaluate the therapeutic efficacy of fractional CO₂ laser pretreatment compared with autologous hair transplantation and phototherapy alone for refractory and stable vitiligo.

Methodology: A total of 20 patients with refractory and stable vitiligo were enrolled from our clinic. Resistant lesions randomly divided into 2 regions as follows: (1) Part A: Fractional CO₂ laser pretreatment followed by autologous transplantation and phototherapy and (2) Part B: Autologous transplantation and phototherapy alone. Five days after fractional CO₂ laser application to Part A, both treatment regions received a transplant of scalp grafts. On day 11, the entire lesion was exposed to narrow-band UVB phototherapy, twice a week for 12 weeks. The diameter of perifollicular repigmentation was measured monthly with a caliper.

Results: Perifollicular repigmentation was detectable surrounding 74% of grafted hair follicles by month 3. Furthermore, Part A demonstrated a significantly greater diameter of repigmentation with 6.6–5.8 mm in Part A compared with 4.3–1.8 mm in Part B ($p \leq 0.001$).

Conclusion: In this study, our results demonstrate improved efficacy of autologous hair transplantation and narrow-band UVB with fractional CO₂ laser pretreatment in refractory and stable vitiligo.

dr.feily@yahoo.com