



LASERS

TREATMENT OF CAFE-AU-LAIT SPOTS USING Q-SWITCHED ALEXANDRITE LASER AN ANALYSIS OF CLINICAL CHARACTERISTICS OF 471 CHILDREN

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Objective: To investigate the efficacy, safety and clinical factors in the treatment of cafe-au-lait spots using Q-switched Alexandrite laser (755nm) therapy in children.

Methods: 471 children with cafe-au-lait spots were treated by Q-switched Alexandrite laser at a treatment interval of 3 to 12 months. The safety and efficacy of the laser treatment were evaluated by reviewing clinical records and photos before and after treatments. The clinical results of different groups were compared using Kruskal-Wallis H test; the treatment efficacy and number of treatment sessions performed were analyzed using Spearman rank correlation and multivariate logistic regression to assess clinical factors influencing treatment efficacy.

Results: of the 471 patients, 140 (29.72%) patients were cured completely, 124 (26.33%) were significantly improved, 110 (23.35%) were improved and 97 (20.60%) were without improvement after 1 to 9 times of treatments. The overall successful treatment rate was 79.41%, and the treatment efficacy was positively correlated with the number of times of laser treatment ($r_s=0.26$, $P<0.0001$). Gender and interval of laser treatment were also found to be associated with significant differences in treatment outcomes ($P\leq 0.05$) while there was no significant difference in other six groups ($P>0.05$). No obvious adverse effect was identified except a few cases with transient hyperpigmentation, hypopigmentation and superficial punctate scar. Multivariate logistic regression analysis showed that the times of treatment could affect the treatment efficacy of children's cafe-au-lait spots with its OR value being 2.130, 95% CI from 1.561 to 2.908.

Conclusions: Q-switched Alexandrite laser (755nm) therapy is a safe and highly effective therapy for cafe-au-lait spots in children and the number of times of treatment would affect the treatment efficacy.

[Key words] Q-switched Alexandrite laser; cafe-au-lait spot; therapeutic effect; children

