Abstract

BACKGROUND: Pinhole method has been used to treat various types of scars and dermal tumors by making multiple small holes in target tissues of the deep dermis using an ablative 10,600-nm carbon dioxide (CO₂) laser.

OBJECTIVES: We prospectively investigated the efficacy and safety of using a CO₂ laser to treat periorbital syringomas via the pinhole method.

METHODS: A total of 29 patients with periorbital syringomas were treated with two sessions of CO₂ laser treatment using the pinhole method at two-month intervals. Laser fluences were delivered under the following settings: pulse duration of 200 µs, frequency of 50 Hz, on time of 0.04, and an off time of 0.01.

RESULTS: Among the 29 patients, 13 patients (44.8%) presented with small discrete papular syringomas, 10 (34.5%) had plaque-type lesions, and six (20.7%) had mixed lesions. Evaluation of the clinical results at 2 months after the second treatment session revealed marked clinical improvement (51-75%) in 10 of the 29 patients (34.5%), moderate clinical improvement (26-50%) in eight (27.6%), near-total improvement (≥ 75%) in seven (24.1%), and minimal improvement (0-25%) in four patients (13.8%).

CONCLUSIONS: Our observations indicated that application of the pinhole method using a CO₂ laser exerts positive therapeutic effects in Asian patients with periorbital syringomas.

KEYWORDS: carbon dioxide; laser; pinhole; syringoma

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