

*Letter to the Editor*

## Successful treatment of venous lake of the lip with a 577 nm pro yellow laser: a novel approach

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To the editor,  
Venous lakes are benign vascular malformations caused by dilated venules in the upper dermis that typically occurs in sun-exposed areas of the body. Lips are the most common areas of venous lakes. Patients often request treatment to prevent recurrent bleeding and for cosmetic reasons (1). Successful results can be obtained with traditional treatments such as surgical excision, cryosurgery,

sclerotherapy and electrocoagulation, but especially cosmetic results may not be satisfactory (2). Scar formation is an important cosmetic problem after these traditional treatments. Laser and light-based treatment modalities can offer a safe and effective alternative, successful results have been reported with intense pulsed light, argon lasers, pulsed dye lasers, Nd: YAG lasers, diode lasers, and carbon dioxide lasers systems in

the literature (2-6). To our best knowledge, venous lake treatment with pro-yellow laser has not been reported in the literature. Herein, we present a case of lip venous lake successfully treated with 577-nm pro-yellow laser.

A 45-years-old Fitzpatrick Skin Type III female case admitted to our cosmetology clinic with one-year history of previously untreated dark-blue stain on the lip. Venous lake lesion was seen on the left side of the lower lip (Fig. 1).



**Fig. 1.** Venous lake on the lower lip and significant regression after 577-nm pro-yellow laser treatment.

There were no additional features in the medical history of our case. The 577 nm pro-yellow laser treatment was chosen for the treatment of our case due to its effectiveness and safety in vascular lesions.

Pro-yellow laser treatment was applied two sessions with four-week intervals: 20 J / cm<sup>2</sup> (Basic mode 20 j / cm<sup>2</sup>, 1 mm, 3 Hz) for the first session and 22 J / cm<sup>2</sup> (Basic mode 22 j / cm<sup>2</sup>, 1 mm, 3 Hz) for the second session. After the laser

treatments, the case experienced minimal edema and rash in the laser therapy area. The case was suggested to use sunscreen regularly. After the treatments, a significant regression was observed the lesion, no side effects developed (Fig. 1).

The main target chromophore in laser treatment of vascular lesions is hemoglobin, and also the main target chromophore in venous lake laser treatments is hemoglobin (2-6). The 577-nm pro-yellow laser is a safe and effective laser system

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in the treatment of vascular lesions (7-9). In our case, 577 nm wavelength was used in venous lake treatment based on this vascular theory. In the literature, successful results with pro-yellow laser treatment have been reported in the treatments of facial erythema, rosacea, post-acne erythema, facial telangiectasis, hemangioma, poikiloderma of Civatte, Becker's nevus and port wine stain nevus (7-9). Our case is the first report in the

literature that 577-nm pro-yellow laser treatment was used in venous lake treatment.

In conclusion, the 577-nm pro-yellow laser is a reliable and effective laser for the treatment of the venous lake of the lip. In the future, we think that pro-yellow laser can be advised in patients with venous lakes. Further clinical studies are required to improve our findings.

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