Evaluation of the effectiveness and safety of Nd-YAG laser in the treatment of facial telangiectasia

Abstract

Background: Although sclerotherapy still remains the gold standard for the treatment of telangiectasia, an effective alternative treatment method is necessary because many people fear injections, are allergic to sclerosing agents, or are at high risk of various complications after sclerotherapy such as post-sclerosis pigmentation and and telangiectatic matting.

Aim: To evaluate the effectiveness and safety of Nd-YAG laser in the treatment of facial telangiectasia.

Materials and methods: In this retrospective study, the files of 51 patients with telangiectasia treated with YAG-Nd laser were examined. Information about age and sex was extracted from the patients' files and recorded in the checklist. All patients were treated with Nd YAG laser made by Lutronic company with German Zimmer cooling system. The settings of the laser were as follows: Spot size 2, fluence 160-220 mj/cm2, wavelength 1064 nm, and beam radiation interval one tenth of a second. In order to check the effectiveness of this treatment method, the images that were prepared before the beginning of the treatment sessions and also after each session and were available in the patients' files were used. In addition, the amount of pain and complications related to the treatment was also determined for all patients and recorded in the checklist.

Results: The mean age of the patients was 42.7 ± 10.4 years and 39 patients (76.5%) were female and 12 patients (23.5%) were male. The recovery rate of the patients was 85.1%±16.4%. The majority of patients (78.4%) had a recovery of 80% or more.

Complications included erythema (all patients), burning (90.2%), edema (11.8%), hyperpigmentation (3.9%), and vesicles (3.9%). Pain during laser treatment was mild in most patients (68.6%). There was no statistically significant difference in the effectiveness of treatment and its related complications between male and female patients ($P>0.05$).

Conclusion: The results of this study showed that the Nd-YAG 1064 laser is an effective and safe treatment method for facial telangiectasias that is well tolerated by patients and has minimal side effects.
Keywords: Telangiectasia, Nd-YAG laser, effectiveness.