

A new technique based on Long-Pulsed Nd:Yag Laser with a “*in motion*” setting for the treatment of erythematous-telangiectasic rosacea.

To the Editor,

Rosacea is an inflammatory condition of the face characterized in its early stages by flushing, erythema and telangiectasias. For this reason, it is defined as erythematous-teleangiectasic rosacea (ETR). Early treatment of vascular lesions allows to limit the exacerbations of the disease and in this regard physical therapies such as lasers have shown excellent results in the management of telangiectasias. [1]

However, the role of Nd:Yag laser on the erythematous component is poorly studied. In fact, because the redness in patients with ETR is diffuse and there is no specific target as in telangiectasias, intensified pulsed light (IPL) is very often used producing discordant results. [2] Recently, however, Say et al. demonstrated an excellent result in a study involving 66 patients affected by ETR treated with long-pulsed Nd:YAG laser with 2 to 3mm spot size, 100 to 160J/cm², 15 to 20msn pulse durations. [3]

Based on these data, we describe a new technique that aims to reduce side effects of Nd:Yag laser (such as pain, burns and vesiculation) and to ensure a homogeneity in the treatment. [Fig. 1, 2]

The innovation of this procedure consist in using Nd:Yag laser with a multi-pass technique. The movement technique uses minimal energy output to reduce pain sensation. While performing this procedure, the operator must continuously move the handpiece in a slow linear/circular motion, creating a 5 x 5 cm area and performing multiple passes back and forth until a defined build-up of energy (typically 2/3 passes).

The emission frequency will be set to a higher frequency than the standard procedure (multiple pulses per second). The clinical endpoint will be mild erythema: medium reddening associated with a slight sensation of heat that should disappear within a few minutes, like the previous stationary technique (Single Pass). This method allows to induce a progressive increase in temperature, monitoring the skin reactions and being able to interrupt or modify the treatment at any time, thus minimizing the typical side effects of the traditional method.

In a retrospective personal case study of 21 patients (14F, 7M) with an average age of 42 years (range 34-61), treated with two sessions at a distance of one month, with phototype up to III (5 phototype I, 14 phototype II, 2 phototype III) with power 20J/cm², 5 mm spot size (AGAIN Deka Mela Srl, Italy) we observed a reduction of the erythematous component between 50% and 80% after two sessions, with an average pain score attributed to the treatment, measured by VAS, of 2 (min:1, max:3). This case series is the first available in the literature to propose this innovative treatment based on the “*in motion*” technique, which reduces the side effects and pain often

associated with NdYag lasers. Future prospective studies will allow to evaluate also recurrence rates and disease-free times after two laser sessions to confirm and/or implement this new technique.

Figure legend:

Figure 1: Erythematous rosacea before (up) and after (down) treatment with NdYag laser used in high energy motion (20J/cm²; spot 5 mm).

Figure 2: Erythematous rosacea before and after treatment with fast-moving NdYag laser. A clear reduction of the erythematous component is observed using the vascular filter already after the second session.

References

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