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Treatment of Facial Telangiectasias with GentleYAG® Variable-pulsed Nd:YAG Laser

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Introduction

Telangiectasias may be divided into three morphological variants. The first is a nodular ectasia that is either a localized capillary or venous in its source. The second variant is that of spider ectasias. These have a central punctum and blanch with pressure, filling from the center after release of the pressure. These lesions may be spontaneous nevoid lesions or acquired. The spider ectasias are most common on the trunk but may arise in any location. The third type is the linear telangiectasias. These lesions tend to be more blue than pink in coloration. Although these may arise in any location, they are very common on the face and around the nose.

Most of the facial telangiectasias found in clinical practice are associated with rosacea and are of the blue linear type on the face.

Electrocautery with a small epilating needle was the original treatment of choice. This was limited by ineffectiveness or discomfort. Scarring was a rare complication.

Many lasers have been utilized to remove these unsightly lesions. Early Argon lasers were somewhat effective but had a high risk of scarring or hypopigmentation. The 532 nm long-pulsed Nd:YAG has been reported to be effective in treating facial telangiectasias. The lesions most likely to respond are smaller (less than 0.5 mm) red

or pink vessels. This laser has not been reported to be effective with larger blue vessels of the nose. The pulsed dye lasers may be the most effective laser for the majority of facial telangiectasias. The Vbeam® laser has been reported to treat rosacea and facial telangiectasias. This laser is also limited in its effectiveness in treating larger blue vessels of the nose.

A new approach has been to utilize the GentleYAG variable-pulsed Nd:YAG laser to treat the larger nasal vessels.

Method

After signing an informed consent, the patients are photographed and then treated with the GentleYAG laser. Telangiectasias up to 1 mm that are either red or blue may be treated (see Figure 1). These lesions are treated with the 3 mm spot, 130 J/cm², 20 msec pulse duration, and the Dynamic Cooling Device™ (DCD™) set at a 40 msec pulse and a 30 msec delay.

The end point of the treatment is complete blanching of the vessel. Multiple pulses in any one area must be avoided. Any epidermal damage and any white discoloration of the overlying skin must also be avoided.

There is no need for a topical anesthetic at these fluences, but the treatment will cause some discomfort. Any topical anesthetic must be weighed for its effect versus its potential to blanch the vessel and therefore decrease its efficacy.



After the treatment, the vessels should all be clear (see Figure 2), with some residual erythema from the heat of the laser.

Results

All the vessels on the nose should resolve with this treatment. Approximately 15% of the lesions return after a four-to-six week time period and will usually respond to a second treatment.

Discussion

The safety of the variable-pulsed GentleYAG laser has been documented in the removal of hair in all colors of skin. This laser has also been successful in treating leg veins, especially those between 1 and 2 mm in diameter.

This paper has demonstrated the effectiveness in treating blue veins on the nose and face. These lesions have been very difficult to treat in the past. The GentleYAG adds a new method that far surpasses any other treatment modality available.



Figure 1: Pretreatment



Figure 2: Post-treatment

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