Vbeam™ Pulsed Dye Laser Treatment of Poikiloderma of Civatte

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Introduction

Poikiloderma of Civatte, first described in 1923 by a French dermatologist[1], is a combination of atrophy, telangiectasia and irregularities in pigmentation. This pigmentary change is usually a brownish red reticulated pigmentation. At one time this disorder was felt to be due to a hormonal abnormality and limited to menopausal and post-menopausal women. It is now understood to be a result of chronic sun damage and affects both men and women with excessive sun exposure. This is often found on the cheeks and lateral neck and may extend well down onto the chest. The submental area is conspicuously spared.

Treatments in the past have been largely ineffective. These have included electrocautery, chemical peels and argon lasers. The pulsed dye laser with a 585 nm wavelength, a 5 mm spot size and a 360 ms pulse duration was shown to be effective in one patient[2]. The limitations were the small spot size and the significant purpura that followed the laser treatment.

This early laser success suggested that newer lasers would be even more effective in treating this troublesome condition.

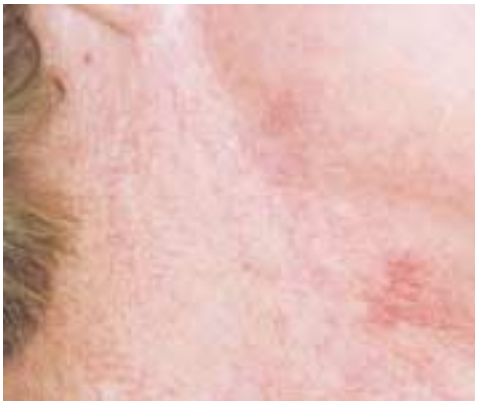
Method

After signing an informed consent for pulsed dye laser treatment, patients were treated with the Vbeam laser using the 10 mm round spot. The parameters were 595 nm light, 10 ms pulse duration, between 5.0 and 6.5 J/cm^2 with the Dynamic Cooling Device™ either off or set with a spray of 30 ms and a delay of 20 ms. The entire involved area was treated in each session. The number of pulses was dependent on the total area of involvement. A SecondSkin® dressing was applied after the treatment and left in place for three hours. Patients were treated a total of two or three times, all with similar parameters.

Results

There was a greater than 75% improvement in all fifteen of the patients treated. See the following figures 1 and 2.

Figure 1



Pre-treatment

Figure 2

After two treatments at four-week intervals

There was no post-operative purpura at the settings used. There were no side effects noted in any of these patients.

Discussion

There have been an abundance of articles published demonstrating the effectiveness and safety of pulsed dye lasers for treating vascular disorders such as port wine stains in children and adults, proliferative hemangiomas in children, facial telangiectasia, leg veins and telangiectatic rosacea.

Although there are other lasers that are effective in treating some of these vascular conditions, the pulsed dye laser was chosen to treat patients with Poikiloderma of Civatte because of its effectiveness and safety. The neck area has always been considered a more risky area to treat than the face due to poorer healing and an increased risk of scarring. There have been no reports in the literature of scarring on the neck with pulsed dye lasers and no evidence in our treatments.

Poikiloderma of Civatte is a combination of both hyperpigmentation and telangiectasia in a setting of generalized solar damage. It is unclear why the pulsed dye laser appears to be effective in treating both the telangiectatic component and some of the hyperpigmentation but this has been shown in both our patients and in the previously published study with the 585 nm, short pulsed laser.

In summary, the Vbeam pulsed dye laser appears to be an extremely effective modality to treat Poikiloderma of Civatte. There is minimal post-operative purpura, good results and very little risk of adverse effects.

Bibliography

1. Civatte A. Poikilodermie reticulée pigmentarie du visage et du cou. Ann Dermatol Syphiligr (Paris) 1923; 4:605-620.

2. Wheeland RG, Applebaum J. Flashlamp-pumped pulsed dye laser therapy for Poikiloderma of Civatte. J Dermatol Surg Oncol 1990; 16:12-16.

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