

of post-treatment complications and follow-up of 20 patients over four years. Results indicate that contrary to these established references, all of the above-mentioned conditions were encountered in a majority of patients treated with the flashlamp-pumped pulsed dye laser even at low to moderately-low fluences. Although slight improvement was obtained in some patients, hypopigmentation and scarring were common. Hyperpigmentation was in most instances transient, but permanent hypo- and depigmentation were observed in a majority of patients. This undesirable response to laser treatment might be caused by mechanisms responsible for photodamage and poikiloderma or they might simply reflect the delicate nature of neck and chest skin or a combination of both. It appears that the treatment of poikiloderma in the neck and chest area should be approached with great caution.

210

Comparison of variable pulse width and wavelength pulsed dye laser with the variable pulse with 532nm laser for the treatment of facial vascular lesions

Vic Narurkar MD, Ann Haas MD, UC Davis Laser Center

Selective destruction of vascular lesions involves optimizing wavelength and pulse duration. This study was undertaken to compare different pulse durations and wavelengths for the treatment of facial vascular lesions on the same patient. Fifty patients with facial telangiectasias, spider angiomas, and other vascular proliferative lesions were treated with the pulsed dye laser at 585nm, 590nm, 595nm and 600nm with pulse durations at 450usec and 1.5 msec (Cynosure VLS laser) and the variable pulse duration 532nm laser (Coherent Versapulse laser)

Parameters examined included endpoints of treatment, number of treatments, patient comfort, post-operative healing and final outcome. The majority of facial vascular lesions showed equivalent outcome. Advantages of the pulsed dye laser included ease of operation, more predictable endpoint and speed. Advantages of the Versapulse laser included lack of purpura, greater patient comfort and reduced post-operative recovery time. We conclude that variable pulse 532nm and variable pulse and wavelength FPD are highly selective modalities for treating facial vascular lesions

211

THE EFFECTS OF CRYOGEN SPRAY COOLING ON PULSED DYE LASER TREATMENT OF VASCULAR LESIONS

Kauvar, ANB, Grossman, MC, Bernstein, LJ, Kovacs, SO, Quintana, AT, Geronemus RG
Laser and Skin Surgery Center of New York

Millisecond cryogen spurts immediately prior to laser irradiation can rapidly reduce the epidermal surface temperature to the range of 30°-40° C, thereby reducing treatment discomfort and protecting the

epidermis from thermal injury during pulsed dye laser treatment. The purpose of this presentation is to discuss the effects of cryogen spray cooling used in conjunction with pulsed dye laser treatment for a variety of vascular lesions, including port wine stains, hemangiomas, telangiectases and leg veins.

Patients with port wine stains, hemangiomas and telangiectases were treated with a flashlamp-pumped pulsed dye laser at a wavelength of 595 nm and a pulse duration of 1.5 msec. In each patient, selective lesion sites were treated with and without cold cryogen spurts ranging between 20-50 msec in duration and delivered 20-50 msec immediately prior to laser irradiation.

The ability of cryogen spray cooling to protect the epidermis (with regard to the development of post-treatment erythema and pigmentary change), reduce intra-operative discomfort and allow for the safe utilization of significantly higher fluences, and its effects on treatment efficacy will be discussed.

The optimal treatment parameters for cryogen spray cooling in conjunction with pulsed dye laser treatment of vascular lesions are presented.

Cryogen spray cooling has enabled pain-free treatment of vascular lesions which is particularly beneficial for treating vascular birthmarks in pediatric patients. Other potential advantages of skin cooling, including epidermal protection and the ability to use higher treatment fluences are explored.

212

LONG-PULSED 532nm LASER TREATMENT OF FACIAL TELANGIECTASIAS

Emil A. Tanghetti, M.D., Robert M. Adrian, M.D., Center for Laser Surgery, Sacramento, CA, Washington, D.C.

Facial Telangiectasias are a frequently observed cosmetic concern. We treated 100 patients with facial telangiectasias ranging from .2-1.5mm with a new long-pulsed 532nm Nd:YAG laser (Versapulse[®], Coherent Medical, Palo Alto, CA). Fluences of 9.0-12J/cm² with a 4mm spot, a 10msec. pulse, and a water-cooled chill tip at 4-5.5° C were used. Vessels were treated with 1-4 passes to disappearance or a persistent purple discoloration indicating intravascular thrombosis. 80% of patients achieved 75-100% clearance of their facial telangiectasias after one treatment. 95% of patients achieved this clearance after a second treatment. Patients experienced minimal pain. Transient and mild swelling and erythema were noted after the procedure. These clinical results were achieved without the unwanted purpura associated with pulsed-dye laser treatments. The unique chill tip allows the thermal injury to remain relatively confined to the abnormal vessels and permits the delivery of multiple low-peak temperature heating cycles. The Versapulse[®] laser is an effective tool in the treatment of facial telangiectasias.

213

Treatment of individual cafe au lait macules with Q-Switched YAG and Q-Switched Ruby : a clinopathologic correlation

J.L. Levy, M. Pizzi-Anselme, S. Mordon
Dermatology Laser Center Marseille, Inserm U279, University hospital, Lille, France

Cafe au lait macules (CALMs) respond variably to treatment with lasers. This study was done to identify which individual features of