Lasers for vascular lesions: standard guidelines of care.

Abstract

INTRODUCTION: Lasers are a good therapeutic tool for congenital and acquired vascular lesions. Technological advances in lasers have reduced the adverse effects and increased the efficacy. MACHINES: Among the various lasers used for treating vascular lesions, pulsed dye laser (PDL) has the best efficacy and safety data. The other machines that are widely available are Nd:YAG laser and intense pulse light (IPL). RATIONALE AND SCOPE OF GUIDELINE: Much variation exists in different machines and techniques, and therefore, establishing standard guidelines has limitations. The guidelines recommended here indicate minimum standards of care for lasers on vascular lesions based on current evidence.

PHYSICIAN QUALIFICATION: Laser may be administered by a dermatologist, who has received adequate background training in lasers during post-graduation or later at a center that provides education and training in lasers, or in focused workshops, which provide such trainings. He/she should have adequate knowledge of the lesions being treated, machines, parameters, cooling systems, and aftercare.

FACILITY: The procedure may be performed in the physician’s minor procedure room with adequate laser safety measures.

INDICATIONS: PWS, hemangioma, facial telangiectasia, rosacea, spider angioma, pyogenic granuloma, venous lakes, leg veins.

CONTRAINDICATIONS: Absolute: Active local infection, photo-aggravated skin diseases, and medical conditions. Relative: Unstable vitiligo, psoriasis, keloid and keloidal tendencies, patient on isotretinoin, patient who is not cooperative or has unrealistic expectation.

PATIENT SELECTION: Patient selection should be done after detailed counseling with respect to the course of lesions, different treatment options, possible results, cost, need for multiple treatments, and possible postoperative complications. TREATMENT SESSIONS: The number of treatments per lesion varies from 2 to 12 or more at 6-8 week intervals. All lesions may not clear completely even after multiple sessions in many cases. Hence, a realistic expectation and proper counseling is very important.

LASER PARAMETERS: Laser parameters vary with area, type of lesion, skin color, depth of the lesion, and machine used. A test spot may be performed to determine individual specifications.

COMPLICATIONS: Pain, edema, purpura, bleeding, scarring, postinflammatory hyperpigmentation/hypopigmentation, and atrophy changes.