Successful Treatment of Generalized Essential Telangiectasia With the 585-nm Flashlamp-Pumped Pulsed Dye Laser

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Generalized essential telangiectasia (GET) is a rare vascular condition with limited treatment options. We report the successful treatment of GET with the 585-nm flashlamp-pumped pulsed dye laser (FLPDL).

Generalized essential telangiectasia (GET) is a rare, benign, progressive vascular condition seen most commonly in adult women and characterized by the development of numerous cutaneous telangiectasias.[1] This condition is progressive in nature and can be associated with parasthesialike sensations.[2] Treatment options have not been significantly helpful in improving GET.[3] We report the successful treatment of GET with the 585-nm flashlamp-pumped pulsed dye laser (FLPDL).

Case Report

A 32-year-old white female presented with a 3-year history of progressive development of fine telangiectasias of the lower extremities. During this period, the condition had spread to her thighs and hips but demonstrated no purpura, necrosis, or mucosal involvement. Lesional skin biopsy revealed dilated papillary dermal blood vessels, supportive of a diagnosis of GET, and no abnormal hormone levels were found.

Laser energy test-dosing was performed with the FLPDL (585 nm, 450 μsec; Cynosure, Inc., Chelmsford, Massachusetts) using adjacent, nonoverlapping pulses with a 7- and 10-mm beam diameter. Complete resolution was noted in test-dose areas (Figure 1), and optimal treatment parameters were determined to be 4 to 4.5 J/cm^2 with the 10-mm hand piece. Based on this dramatic result, only one treatment per site was necessary for complete clearing. However, because of the large surface area involved, 4 visits were required, which resulted in complete clearing of her lower legs with only transient pigmentary alterations (Figures 2 and 3).

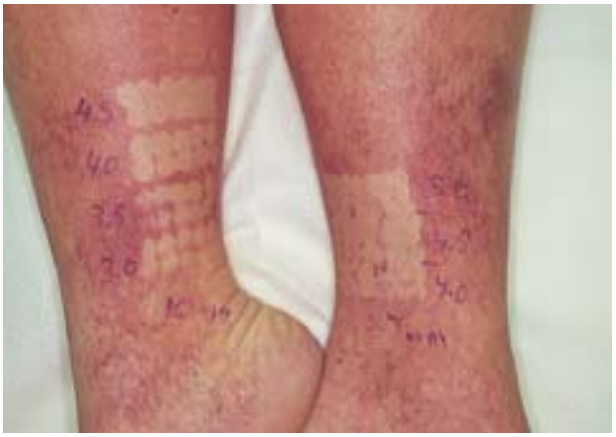

FIGURE 1. Three months after laser energy test-dose, demonstrating dramatic clearing.

Comment

GET typically affects women in early adulthood with lesions initially seen on the lower extremities.[4] Progressive development of telangiectasia is the rule, however, systemic involvement is absent. Histology and lack of staining for alkaline phosphatase support the current theory that this entity involves an abnormality of postcapillary venules.[2,5]

Previous therapies for GET have included compression hose, topical steroids, and tetracycline

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FIGURE 2. Patient's right lateral leg prior to laser treatment showing typical appearance of generalized essential telangiectasia.

FIGURE 3. Patient's right lateral leg after 2 laser sessions demonstrating complete clearing with mild hyperpigmentation.

with mixed responses.[3] The FLPDL was a logical treatment option in this patient because of its success in treating many other benign vascular lesions.[6] The FLPDL selectively targets oxyhemoglobin and leads to destruction of abnormal blood vessels without collateral thermal damage.[7] Appropriate fluences were determined in our patient using test doses to achieve effective clearing of telangiectasias with only mild transient hyperpigmention. This patient demonstrated a dramatic response with only a single laser treatment, in contrast to lower extremity port-wine stains and spider veins. This remarkable success is most likely accounted for by the superficial location of the ectatic postcapillary venules in this disorder (Tina Alster, MD, personal communication, April 1997).

At 18 months, the patient remains clear of telangiectasias at the treated sites with complete resolution of hyperpigmentation. Perez and colleagues[8] reported FLPDL to be successful for a very similar condition. However, Perez and colleagues utilized much higher fluences with a much smaller beam diameter (5-mm spot size at 7 J/cm^2). Because of the use of the larger 10-mm beam diameter, treatment was completed more rapidly and tolerated well by the patient. Although longer follow-up is necessary to assess possible recurrence of this condition, the 585-nm FLPDL appears to be extremely effective in treating GET.

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