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Research Letter

Generalized Essential Telangiectasia Treated With Pulsed Dye Laser: A Case Series of 12 Patients



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To the Editor,

Generalized essential telangiectasia (GET) is an underdiagnosed entity of uncertain origin that typically presents with multiple telangiectasias on the lower limbs, which may progress proximally to the trunk and upper extremities. It predominantly affects women and usually appears from the fourth decade of life onward. GET is usually asymptomatic, and systemic or mucosal involvement is exceptional.^{1,2} Its mainstay of treatment is laser therapy.

Cutaneous collagenous vasculopathy (CCV) is considered a distinct disease by some authors. Although it shares clinical similarities with GET and also responds well to laser therapy, histologic differences between these 2 entities appear to exist.³

In this study, we aimed to describe the characteristics of our patients with GET and evaluate the efficacy of pulsed dye laser therapy (PDL): 595 nm (Vbeam Prima[®], Candela Corp, Wayland, MA) and 585 nm (SPTL-1b[®], Candela Corp, Wayland, MA).

Methods

We conducted a descriptive study including patients with GET treated with PDL in the Dermatology Department of a tertiary hospital from 2000 to 2023. Clinical data and therapeutic response were collected.

Results

The main patient characteristics and information on laser parameters are summarized in Table 1.

None of the patients had a similar family history, mucosal involvement, systemic symptoms, or bleeding. A skin biopsy was performed in 4 of the 12 patients; histologic features of GET were observed in 2 patients and CCV in the other 2. A clinical diagnosis was established in the remaining patients.

Good responses with lesion clearance were observed in most patients, especially after the first session, as illustrated in the patient shown

Table 1

Main patient and treatment characteristics.

| No. of patients | Women, no. (%) | Men, no. (%) | Median age at diagnosis, years | Anatomical involvement | PDL (595 nm) parameters | Mean no. of sessions (range) | Mean treatment duration, years (range) |
|-----------------|----------------|--------------|--------------------------------|----------------------------------|---|------------------------------|--|
| 12 | 10 (83.3) | 2 (16.7) | 55 | Legs (11); arms (4); abdomen (1) | Spot size, 10–12 mm ^a ; pulse duration, 0.5–1.5 ms ^b ; fluence, 5–8 J/cm ^{b,c} | 5 (1–8) ^d | 5 (1–7) ^d |

A purple endpoint was consistently obtained after PDL treatment using conservative parameters with low fluence (5–8 J/cm²) and a short pulse duration (0.5–1.5 ms).

^a Spot size.

^b Pulse duration.

^c Fluence.

^d Range.

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Fig. 1. One of the patients with GET treated with PDL (595 nm). (a) Before PDL, multiple telangiectasias on the distal legs, ankles, and dorsum of the feet. (b) After 1 session of PDL, partial improvement of the lesions. (c) After 2 sessions of PDL, almost complete clearance of the lesions.



Fig. 2. Another patient with GET treated with PDL (595 nm). (a) Before PDL, multiple telangiectasias on the legs. (b) After 4 sessions of PDL, partial improvement of the lesions with postinflammatory pigmentation. (c) After 6 sessions of PDL, slight additional improvement with resolution of the postinflammatory pigmentation.

in Fig. 1. Similar efficacy was observed across the different anatomical areas involved. No adverse effects were reported in any of the patients; however, in a few cases, lesion clearance was preceded by postinflammatory pigmentation, as shown in the patient in Fig. 2.

In addition, partial recurrence or the development of new lesions was observed in some patients several months to years after the last therapeutic session. However, lesion clearance was again achieved after retreatment in all cases.

Conclusions

PDL may be an effective therapeutic option for the treatment of GET and CCV (if considered a separate disease), frequently resulting in rapid improvement and clearance of vascular lesions from the first treatment session. The use of conservative parameters followed by favorable outcomes without adverse effects also supports the safety of this treatment, similar to the use of laser therapy for capillary malformations in children. This may represent an advantage compared with the Nd:YAG laser,

which is associated with a higher risk of adverse effects despite careful parameter adjustment.

Although recurrence after treatment or the appearance of new lesions may occur, periodic treatment sessions may represent a safe strategy for controlling this chronic vascular disorder while maintaining good esthetic outcomes. A possible limitation of our study is the inclusion of patients with CCV within the same spectrum as GET.

Our results are consistent with previously published reports describing single cases or small case series of 2 to 3 patients treated with this type of laser,^{4,5} as well as studies involving CCV,⁶ intense pulsed light therapy,⁷ or Nd:YAG laser.⁸ Although this case series is among the largest reported to date, the small sample size indicates that further studies will be necessary to fully establish the role of this treatment modality.

Informed consent

All patients in this manuscript gave written informed consent for publication of their case details.

IRB

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Conflict of interest

The authors have no conflict of interest to declare.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available due to privacy or ethical restrictions.

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