

Treatment of Chronic Facial Erythema of Dermatomyositis with Intense Pulsed Light Therapy

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Dermatomyositis is an idiopathic inflammatory myopathy that may include persistent facial erythema, which is refractory to topical and systemic treatments. In previous reports a pulsed dye laser was effective in the treatment of these skin lesions. We report the first case of the use of intense pulsed light therapy for treatment of cutaneous lesions in dermatomyositis, which showed satisfactory results without aggravation of the disease activity or other complications.

Key words

Dermatomyositis; Intense pulsed light

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INTRODUCTION

Dermatomyositis (DM) is an idiopathic inflammatory myopathy characterized by typical cutaneous lesions, including Gottron's papules, periorbital violaceous or heliotrope rash, periungual telangiectasia, facial erythema and poikiloderma vasculare atrophicans.¹ For the treatment

of these cutaneous lesions, topical steroids and topical calcineurin inhibitors are commonly used, while systemic agents such as glucocorticoids, antimalarials and methotrexate may be used in refractory cases.² Despite all these treatments, cutaneous lesions may persist, causing severe impacts on patient's quality of life. To our knowledge, this is the first report of intense pulsed light (IPL) used in



Fig. 1. Persistent erythema and hyperpigmentation is seen on the patient's forehead (A) and her right cheek (B).

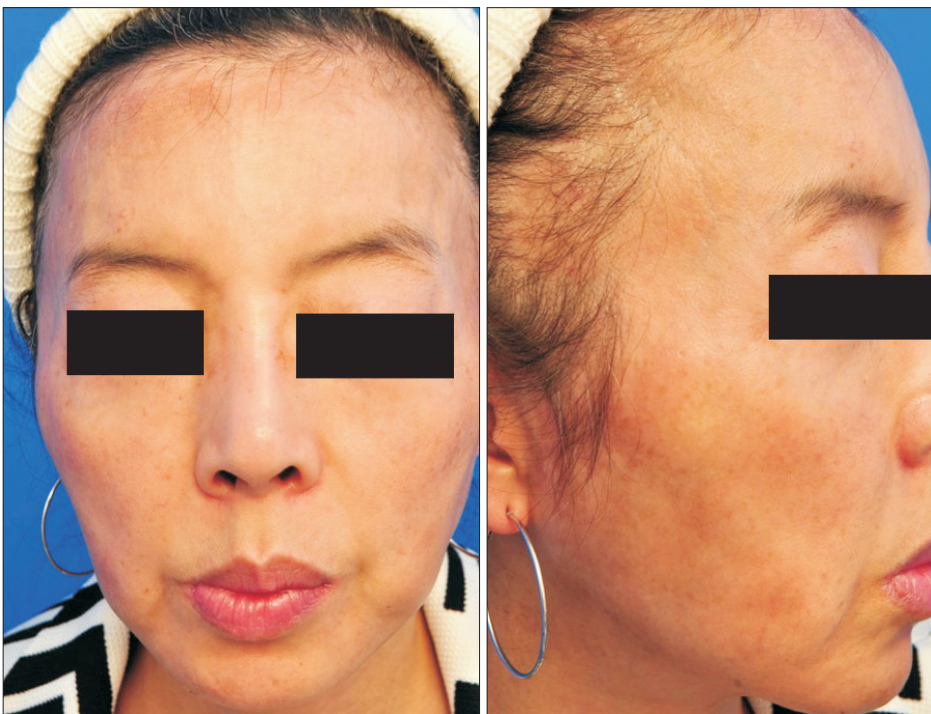


Fig. 2. Improvement of the skin lesions can be observed 6 months after the initial intense pulsed light (IPL) treatment. 5 sessions of IPL treatments have been done.

the treatment of the persistent facial erythema in cutaneous dermatomyositis.

CASE REPORT

A 48-year-old female visited with skin lesions on her forehead, both cheeks, and hands. She was diagnosed with dermatomyositis 12 months prior to her visit to the dermatology clinic. Typical Gottron's papules were observed on her dorsums of both hands with persistent erythema and postinflammatory hyperpigmentation on her forehead, cheeks, and neck (Fig. 1). Her general symptoms were well-controlled with hydroxychloroquine, azathioprine, and low dose systemic steroid. Topical tacrolimus was also prescribed, but her cutaneous symptoms showed only minimal improvements. She was distressed with the redness on her face, which significantly affected her quality of life.

Treatment with IPL (BBL; Sciton Inc., CA, USA) was tried using 590-nm cutoff filter at a fluence 18-20 J/cm². Double pulse mode (two stacked 5-ms pulses with a 20-ms delay) was selected. Significant improvements were observed with consecutive treatments and after six months, with a total five sessions of treatments, the patient was well-satisfied with the progresses (Fig. 2). The patient complained of only mild irritations after the treatments with no aggravation of the disease activity or any other severe complications were observed.

DISCUSSION

Due to the disfiguring skin changes in connective tissue diseases, the implications of laser therapies have been emerging.³ Table 1 lists the reports of the use of lasers in dermatomyositis. They have shown that pulsed dye laser and argon laser are efficacious in the treatment of erythema, poikiloderma, telangiectasia, and Gottron's papules in dermatomyositis.⁴⁻⁶ Although the use of IPL has not been applied to cutaneous dermatomyositis, it was reported to be effective in treating persistent erythema in lupus erythematosus.⁷

IPL emits high-intensity polychromatic light in a broad wavelength spectrum of 515-1,200 nm. Due to its wide spectrum, individual treatment parameters can be selected, adapting to different skin types and indications. Because of these characteristics of IPL, its use is indicated in the treatment of various skin lesions, including pigmented lesions, erythema, telangiectasia, and hair removal,^{8,9} and its uses are becoming more diverse.

Regarding safety issue, there have been concerns

Table 1. Literatures reporting therapeutic efficacy of lasers on dermatomyositis

Author	Study Year	Type of Study	Location	Type of lesion	Laser (nm)	Number of treatments	Treatment Schedule	Response
Zachariae et al.	1988	Case series	Face	Telangiectasia	Argon (514)	-	-	"Almost normal appearance"
Yanagi et al.	2005	Case report	Fingers, elbows	Erythema, poikiloderma, telangiectasia	Pulsed dye laser (585)	4	Every 3 months	"Significant improvement"
Calvo Pulido et al.	2006	Case report	Face, chest arm, back	Gottron's papules	Pulsed dye laser (595)	3	Every 2 months	70% Improvement

about paradoxical worsening of lesions after exposure to lasers or light devices in these photosensitive disorders. However, a recent comprehensive review suggested no case reports have been published reporting the development or worsening of preexisting connective tissue disease after using lasers.³

To our best knowledge, this is the first report of the use of IPL in a patient with cutaneous dermatomyositis. IPL was found to an effective treatment method that did not interfere with the disease activity of dermatomyositis. Although more studies on its efficacy are required, IPL can be an effective and safe method of treatment for disfiguring skin changes in patients with dermatomyositis.

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