

Treatment of telangiectasia in surgical scars on the face with intense pulsed light: case series

Tratamento de telangiectasias em cicatriz cirúrgica em face com luz intensa pulsada: série de casos

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ABSTRACT

Intense Pulsed Light (IPL) is an effective technology to treat vascular lesions, pigmented lesions, and photorejuvenation, among other indications. In the case of telangiectasia, its mechanism of action is based on photothermolysis of the vessels, inducing intravascular coagulation. We report three cases where IPL was used to treat telangiectasia in a surgical scar, showing good aesthetic results after three sessions.

Keywords: Cicatrix; Telangiectasis; Intense Pulsed Light Therapy; Erythema

RESUMO

A luz intensa pulsada (LIP) é uma tecnologia eficaz para o tratamento de lesões vasculares, lesões pigmentadas, fotorrejuvenescimento, entre outras indicações. No caso das telangiectasias, seu mecanismo de ação baseia-se na fototermólise dos vasos, induzindo a coagulação intravascular. Relatamos três casos em que a LIP foi utilizada para tratar telangiectasias em cicatriz cirúrgica, apresentando bons resultados estéticos após três sessões.

Palavras-chave: Cicatriz; Telangiectasia; Terapia de Luz Pulsada Intensa; Eritema

Case Report

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INTRODUCTION

Intense pulsed light (IPL) is a technology created to treat vascular lesions, pigmented lesions, and other applications, such as hair removal and photorejuvenation. It became a very versatile tool in Dermatology by producing single or multiple synchronized pulses at a wavelength of 400–1200 nm and with the possibility of varying the duration of these shots.¹

This study aims to demonstrate the use of IPL therapy in scars on the face, targeting to reduce erythema and the presence of telangiectasia. We report three cases where we used IPL therapy in the scar region, with good aesthetic results.

METHODS

Three patients reporting aesthetic discomfort with the scar on their face after surgical excision of basal cell carcinoma (BCC) underwent IPL treatment (Table 1).

Patient 1: A 61-year-old man presented a grayish papule on the tip of the nose. We performed an incisional biopsy with an anatomopathological report of nodular and micronodular BCC. Surgical excision was performed using the advancement flap reconstruction technique (Figure 1).

Patient 2: A 64-year-old woman had an erythematous papule with a pearly sheen on the left epicanthus. We performed an incisional biopsy with an anatomopathological report of expansive nodular BCC. Surgical excision was conducted with Mohs micrographic surgery associated with the rotation flap reconstruction technique (Figure 2).

Patient 3: A 58-year-old woman presented an erythematous papule with a pearly sheen on the nasal dorsum. We performed an incisional biopsy with an anatomopathological report of sclerodermiform BCC. Mohs micrographic surgery was conducted with primary wound closure (Figure 3).

After surgical treatment, all three patients reported aesthetic discomfort with the surgical scar, with local erythema and telangiectasia. We treated the surgical scars with intense pulsed light (Etherea® Platform) in three sessions at monthly intervals. During treatment with intense pulsed light, patients used chemical sunscreen with a sun protection factor (SPF) 50 daily.

Table 1: Parameters used in each IPL treatment session - filter (nm), fluence (mJ/cm²), pulse duration (ms)

Patient	First session	Second session	Third session
1	540 nm, 16 mJ/cm ² , 15 ms	540 nm, 20 mJ/cm ² , 15 ms	540 nm, 20 mJ/cm ² , 15 ms
2	540 nm, 13 mJ/cm ² , 10ms	540 nm, 18 mJ/cm ² , 10 ms	540 nm, 20 mJ/cm ² , 10 ms
3	540 nm, 14 mJ/cm ² , 10 ms	540 nm, 20 mJ/cm ² , 10 ms	540 nm, 27 mJ/cm ² , 10 ms

nm: nanometer; mJ: millijoule; cm²: square centimeter; ms: millisecond



FIGURE 1: Patient 1
- before treatment with IPL (telangiectasia and erythema on the nasal tip);
After three IPL treatment sessions



FIGURE 2: Patient 2
- before treatment
with IPL
(telangiectasia and
erythema on the
left epicanthus);
After three IPL
treatment sessions



FIGURE 3: Patient 3
- before treatment
with IPL (telangi-
ectasia and erythe-
ma on the nasal
dorsum);
After three IPL
treatment sessions

RESULTS

The three patients evolved with good aesthetic results, evidenced by reduced erythema and telangiectasia in the scar region.

DISCUSSION

The present report demonstrated that treatment with IPL is effective in improving the clinical appearance of patients with facial telangiectasia, with minimal and transient adverse events.^{2,3}

IPL is an effective and safe therapeutic option for rosacea and telangiectasia. IPL treatment stimulates superficial collagen and elastic fibers in the dermis. It is due to the selective absorption of light by tissue water, increasing heat conduction around collagen and, consequently, its production. Also, there is an increase in fibroblasts production due to the photothermal effect.⁴

This type of therapy destroys dilated blood vessels and reduces inflammation levels, contributing to an overall improvement in skin quality.⁵

CONCLUSION

IPL treatment is a safe and effective therapeutic option for improving the aesthetic appearance of surgical scars. ●

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