

Angioma serpiginosum successfully treated by a single session of intense pulsed light therapy

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Angioma serpiginosum (AS) is a nevoid capillary malformation developed congenitally or thereafter. The AS stops growing after puberty and may remain persistent throughout life. The pulsed dye laser (PDL) and KTP are used to treat the AS usually after several sessions. We treated a patient with AS with only one session of intense pulsed light (IPL) therapy. A 40-year-old lady with Fitzpatrick skin type 3 and AS on the left maxillary and infraorbital area was scheduled to be treated with IPL. The lesion was treated by a single pass of IPL therapy with 8 joules/cm², in the telangiectatic mode. No anesthesia more than cooling was used, and a mild erythema was developed immediately after IPL therapy, which subsided soon after the procedure. Two months later, telangiectatic lagoons were completely removed, and only very faint erythema remained. IPL is an effective and more tolerable device for the treatment of AS, with no purpura and discoloration, as frequently observed following PDL therapy.

Keywords: Angioma serpiginosum, intense pulsed light, treatment.

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INTRODUCTION

Angioma serpiginosum (AS) is a nevoid capillary malformation due to the ectatic dilatation of capillaries in the papillary dermis. The AS is either seen as a congenital malformation or may develop during the early years of life ¹. This malformation is mostly developed in the lower limbs and buttocks ^{1,2}, yet may also develop elsewhere. The condition starts with a few small lesions which expand over the course of months or years. More often than not, this condition stops after puberty and remain unchanged thereafter. AS is an asymptomatic, non-bleeding and non-blanching lesion, predominantly occurring in females ^{1,3}. Though spontaneous resolutions have been reported, many cases remain unchanged, where treatment is required.

CASE PRESENTATION

A 40-year-old lady with Fitzpatrick skin type

3 referred to us with an erythematous patch over the maxillary and infraorbital area. More close-up observation showed an aggregate of punctate erythematous sub-epidermal lesions which were asymptomatic, non-palpable, non-blanchable by diascopy and with no history of bleeding. The dermatoscopy showed multiple sharply demarcated red lagoons with normal skin in between. Based on these findings, the lesion was diagnosed as angioma serpiginosum and the patient was scheduled to be treated with IPL. No biopsy was done (Figure 1A). The patient had previously referred to many physicians, including dermatologist, and received only topical and un-related medications without any benefit. The lesion was treated with Nordlys intense pulsed light machine, made by Ellipse Company, Denmark. The lesion was treated via the telangiectatic mode of the system and with 8 Joules/cm². Following a single pass of IPL therapy, the area became slightly erythematous with no purpura, as usually observed after pulsed dye laser. The patient suffered a tolerable pain during the



Figure 1. (A) Angioma serpiginosum before treatment. (B) Angioma serpiginosum after treatment.

procedure, yet no discomfort was felt thereafter. The erythema faded soon after the procedure, and the patient was discharged with only a sunscreen for medication. The patient referred 2 months later, and the lesion was completely gone, with no erythematous telangiectatic lagoon and only slight remaining erythema. She was happy with the results and no further treatment was done thereafter (Figure 1B).

DISCUSSION

Although AS is reported as a rare capillary malformation by certain authors, it is not infrequently seen. Upon the advent of dermatoscopy in the field of dermatologic clinical diagnosis, more and more cases of angioma serpiginosum are recorded, which may have previously been diagnosed as other types of capillary malformations. The lesions are usually asymptomatic, non-bleeding, and associated with no systemic problem, hence the fact that the treatment is only required from a cosmetic point of view. As the dermoscopic findings are unique and diagnostic, no biopsy is

either done or is required. The dermoscopic findings are multiple sharply demarcated red lagoons with normal skin in between^{2,3,6}. Histopathologic studies give no more information than dermatoscopy, and their findings include normal epidermis. There are dilated capillaries in the papillary and subpapillary dermis with thickened vessel wall². No medical therapy is available for this disease, yet PDL and other vascular lasers such as KTP are the available reported therapies^{1,4-6}. The PDL has been reported to clear the lesion after about four sessions³⁻⁵, and the KTP is used for two sessions for a near-complete resolution⁶. The advantage of IPL over PDL and KTP is that there is no purpura or discoloration as is seen in PDL^{1,5}, and the lesion is cleared after only one session^{4,5}. The wavelength of PDL is 585 or 595nm and its penetration depth is about 1.2mm below the epidermis or about 2mm from the epidermal surface⁸⁻⁹. The wavelengths of IPL are extended from about 550 to 1100nm. As a rule, the longer the wavelength is, the more the penetration of the laser or light will be, hence the much higher penetration depth of IPL compared with that of PDL. The capillary network in AS

may extent below the papillary dermis deeper than 1.2mm of PDL penetration depth. This may be the reason why the lesions in previous reports were treated with four sessions, and our patients was treated with only one session.

The dermoscopic image of AS is very characteristic and can be easily differentiated from port-wine stain. The dermoscope is a simple device that in dermatology can play the role of stethoscope in internal medicine. Many malignant and non-malignant lesions can easily be detected via this simple and affordable instrument. Through the use of dermoscopy, further sophisticated diagnostic procedures such as biopsy and histopathologic studies can be avoided. Using dermoscopy is not so popular among our native dermatologists. Therefore, it is recommended that teaching dermoscopy to residents should be emphasized.

Conflict of Interest: None declared.

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