

بسم الله الرحمن الرحيم





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بالرسالة صفحات لم ترد بالأصل



PULSED DYE LASER IN THE MANAGEMENT OF SECONDARY TELANGIECTASIA

Thesis

*Submitted for partial fulfillment of the
Master Degree in Dermatology and venereology*

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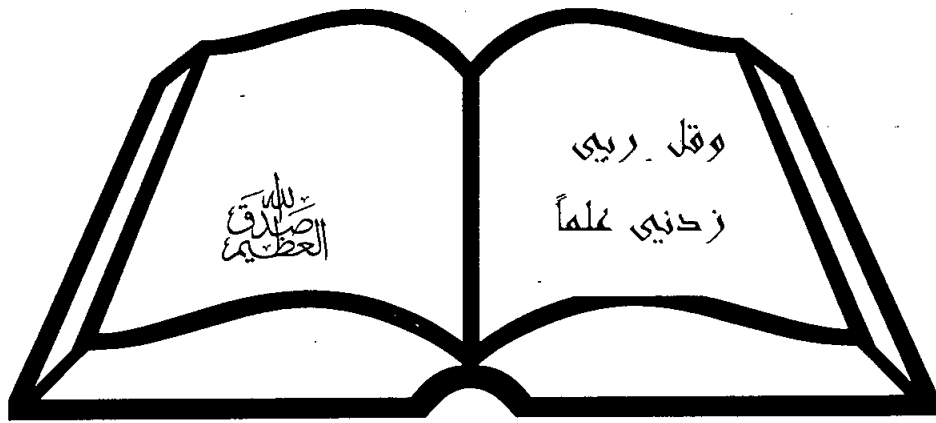
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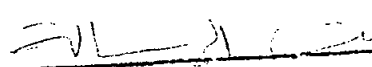
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بعد فحص الرسالة بواسطة كل عضو منفردا وكتابة تقارير منفردة لكل منهم لانتخابات اللجنة مجتمعة في
الاحد

بكلية الطب - جامعة القاهرة وذلك لمناقشة الطالب في جلسة علمية في موضوع الرسالة والنتائج التي توصل
اليها وكذلك الاسس العلمية التي قام عليها البحث .

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ABSTRACT

Telangiectasia is a persistent dilated small vessel, 0.1 to 1.0 mm, which is non pulsatile. Arterial telangiectasia is red and macular while venous is blue and often elevated. It frequently occurs on the face or legs especially red linear and arborizing telangiectasia. It may occur in normal skin, and they are prominent in areas of chronic actinic damage in fair-skinned persons long exposed to sunlight, cold or heat.

Telangiectasias are thought to occur through the release or activation of vaso-active substances under the effect of many factors as anoxia, chemicals, infections, physical and venous insufficiency.

Telangiectasia may be divided etiologically into five groups: Those associated with genetic inheritance as vascular nevi; as an acquired disease with a secondary cutaneous component as LE; a component of a primary cutaneous disease as rosacea and varicose veins or hormonal excesses and physical damage.

KEY WORDS

Patients and Methods.

Conclusion and Recommendations

Contents

	Page
Introduction.....	1
Review of literature.....	3
Patients and Methods.....	52
Results.....	55
Discussion.....	69
Conclusion and Recommendations.....	75
Summary.....	76
References.....	82

Acknowledgment

First of all I would like to thank God for the completion of this work.

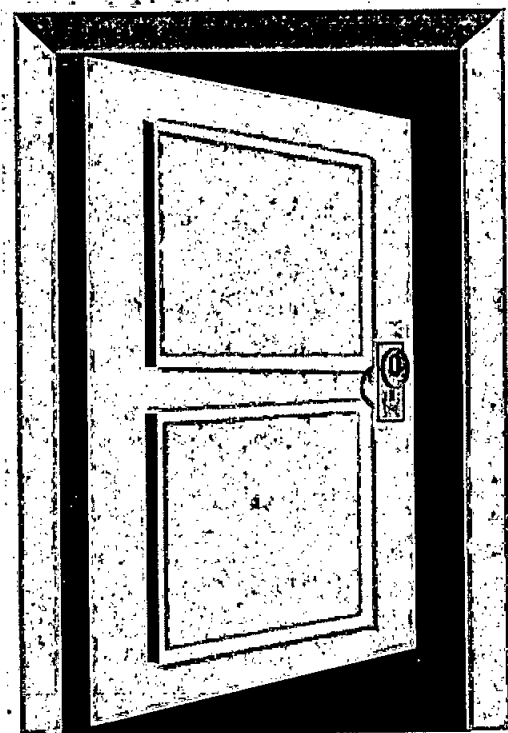
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Introduction



INTRODUCTION

Telangiectasia presents clinically as persistently dilated small vessels, 0.1 to 1.0 mm in diameter, that are non pulsatile and show a variable degree of blanching with diascopy. These lesions can represent a dilatation of a capillary, venule, or arteriole. As a rule, those vessels arising from the arterial side of the capillary loop tend to be bright red in color and macular, whereas those arising from the venous side tend to be blue, of wider diameter, and are often elevated above the skin surface (*Goldman and Bennet, 1987*).

Four distinct clinical appearances have been noted: Sinus or simple, arborizing or branching, spider or star-shaped and punctiform or papular telangiectasias (*Stegman and Tromovitch, 1984*).

Telangiectasia can be classified into 2 types: primary and secondary. Primary lesions are of unknown etiology. Secondary lesions arise as a result of chronic conditions, (e.g. actinic damage), underlying disease processes (e.g. rosacea), hormonal therapy with topical or systemic corticosteroids or estrogens, and conditions with physiologic hormone excess (e.g. pregnancy) (*Applebaum and Nelson, 1992*).

Treatment of benign vascular lesions presents a major challenge to laser technology. Theory predicts that a wavelength of 577nm, an absorption peak of oxyhemoglobin, and a pulse duration of 450μsec will be optimal for selectively destroying the dermal vasculature (*Van Gemert et al., 1986*).

The pulsed dye lasers (PDL) with 450 μs pulse width and 585nm wavelength represent the therapy of choice for telangiectasia of the face and neck. Above 585 nm, the absorption coefficient of hemoglobin

decreases rapidly. Light of these wavelengths can therefore penetrate more deeply into blood, thus enabling the homogenous heating of larger vessels, provided that the applied energy density is sufficient for thermal destruction of the endothelium. Additionally, for an optimal selective photothermolysis, the pulse length should equal the thermal relaxation time of the target structure (*Anderson and Parrish, 1983*).

Recently, new PDL machines with adjustable wavelengths between 585 and 600 nm and a pulse width of 1.5 msec became available with spot sizes of up to 7 mm (circular) or 2x7mm (elliptical) (*Hohenleutner et al., 1998*).

The PDL is an effective treatment for facial telangiectasia. In a large series using the PDL, they found that 97.5% of the patients achieved a good to excellent response with no scarring in the treatment of linear and spider facial telangiectasias using fluences of 6 to 7.75J/cm² and a 5mm spot size. Almost all patients responded on one to three treatments. Pigmentary changes occurred in only 3% of patients and resolved within 12 months. The authors believed that vessels larger than 0.2 mm required multiple treatments and those larger than 0.4 mm were unresponsive. (*Ruiz Esparza et al., 1993*).

Aim of the Work:

The aim of this work is to verify the efficacy of pulsed dye laser in the treatment of secondary telangiectasia, especially cases of rosacea, discoid lupus erythematosus and facial telangiectasia.

*Review of
Literature*

