

THE EFFICACY OF LOW LEVEL LASER THERAPY ON HERPES SIMPLEX LESIONS

A Thesis

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Degree in Physical Therapy*

By

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بِسْمِ اللَّهِ الرَّحْمَنِ

الرَّحِيمِ

Dedication

*This Study is Dedicated to My Parents,
My Sisters, whole My Family and
My Friends, with my Love and Respect.*

*Special Dedication to Every One Support
and Help Me in this Study.*

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First of all thanks is for my 'GOD" who provided me with essential power and patience for completion of this work,

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ABSTRACT

Purpose: To evaluate the efficacy of low level laser therapy in the treatment of recurrent herpes simplex (improving cutaneous manifestations and relieving pain). **Methods:** Forty patients with recurrent Herpes Simplex Type I (oral and perioral Herpes Simplex Type I) infection. The patients were randomly divided into two equal groups, study group (laser irradiation group) and control group. The VAS and Lab assessment (IgG, IgM, PCR) had been measured within 48 hours from the appearance of the cutaneous manifestations (pre), after 7 days (post 1), and after 14 days (post 2), from the beginning of treatment for all groups. For Group A (laser irradiation group); the Ga-As group was set for the treatment with; wavelength: 690 nm and a duration of treatment 10 minutes for each area, per day (1 cm²/day), daily, for two weeks. Also patients received medical care (Topical Acyclovir 5% cream). **Results:** The results showed that there were a significant decrease in pain, faster improvement of cutaneous manifestations and normalization of lab findings in group A patients (laser irradiation group), compared to the Group B patients (control group). **Conclusion:** Low level laser therapy was effective in treating patients with recurrent Herpes Simplex I.

Key words: (Herpes – Gallium Arsenide – IgG, IgM, PCR and HSV1).

List of Abbreviations

AIDS	:	Acquired Immune Deficiency Syndrome
ATP	:	Adenosine Triphosphate
C1	:	Cytosine 1
Cm ²	:	Centimeter Square.
CMV	:	Cytomegalo Virus
Cw	:	Continuing Wave
DNA	:	Deoxyribonucleic Acid
EBV	:	Epstein-Barr Virus.
ELISA	:	Enzyme-Linked Immuno-Sorbent Assays.
Eu/ml	:	ELISA unit/milliliter.
Fig.	:	Figure
Ga-As	:	Gallium Arsenide
HCVF	:	Host Cell Factor
HHV	:	Human Herpes Virus
HIV	:	Human Immunity Virus.
HSV-1	:	Herpes Simplex Virus Type I
HSV-2	:	Herpes Simplex Virus Type II
Hz	:	Hertz = Cycles / Second
IgG	:	Immunoglobulin G

IgM	:	Immunoglobulin M
J/cm ²	:	Joule Per Centimeter Square.
LILT	:	Low intensity Laser Therapy.
LLLT	:	Low Level Laser Therapy
Min.	:	Minute
Mm ²	:	Millimeter Square
Mw	:	Milliwatt.
nm	:	Nanometer.
No.	:	Number
Oct-1	:	Octamer-1
PCR	:	Polymerase Chain Reaction
RNA	:	Ribonucleic Acid
VAS	:	Visual Analogue Scale.
VZV	:	Varicella Zoster Virus.

فاعلية العلاج بالليزر علي إصابات القوباء البسيطة

توطئة

للحصول علي درجة الماجستير في
العلاج الطبيعي

رسالة مقدمة من

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فاعلية العلاج بالليزر علي إصابات القوباء البسيطة.

في هذه الدراسة تم تقييم فاعلية العلاج بالليزر في إصابات القوباء البسيطة وقد قسمت العينة إلي مجموعتين: مجموعة العلاج بالليزر (مجموعة أ)، وقد تلقت العلاج بالليزر ولمدة ١٤ يوم + العلاج الدوائي (أسيكلو فير كريم ٥%) مرتين باليوم.

ومجموعة العلاج الدوائي (مجموعة ب) وقد تلقت العلاج الدوائي فقط (أسيكلوفير كريم ٥%) مرتين باليوم طوال فترة العلاج (١٤ يوم).

وقد تم تقييم التقدم في الحالات بواسطة استخدام (معدل قياس الألام) قبل البدء بالعلاج وبعد ٧ أيام وبعد ١٤ يوم وأيضاً بواسطة التحاليل الكيميائية لقياس استجابة جهاز المناعة للعلاج عن طريق قياس جلوبيولين المناعة ج وجلوبيولين المناعة م، وقياس وجو الشرط الوراثي للفيروس، قبيل بداية العلاج وبعد ٧ أيام وبعد ١٤ يوم.

وقد أثبت الليزر فاعليته في تقليل وانعدام الألم واختفاء الأعراض الجلدية المصاحبة للقوباء البسيطة في وقت اقل من استخدام العلاج الدوائي وأيضاً تحسن في جلوبيين المناعة ج، م مع انعدام وجود الشريط الوراثي للفيروس في الحالات المصابة والتي تم علاجها بواسطة الليزر في حين أن الحالات المعالجة بواسطة الدواء فقط لم يختفي الشريط الوراثي للفيروس الخاص بها.

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