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نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

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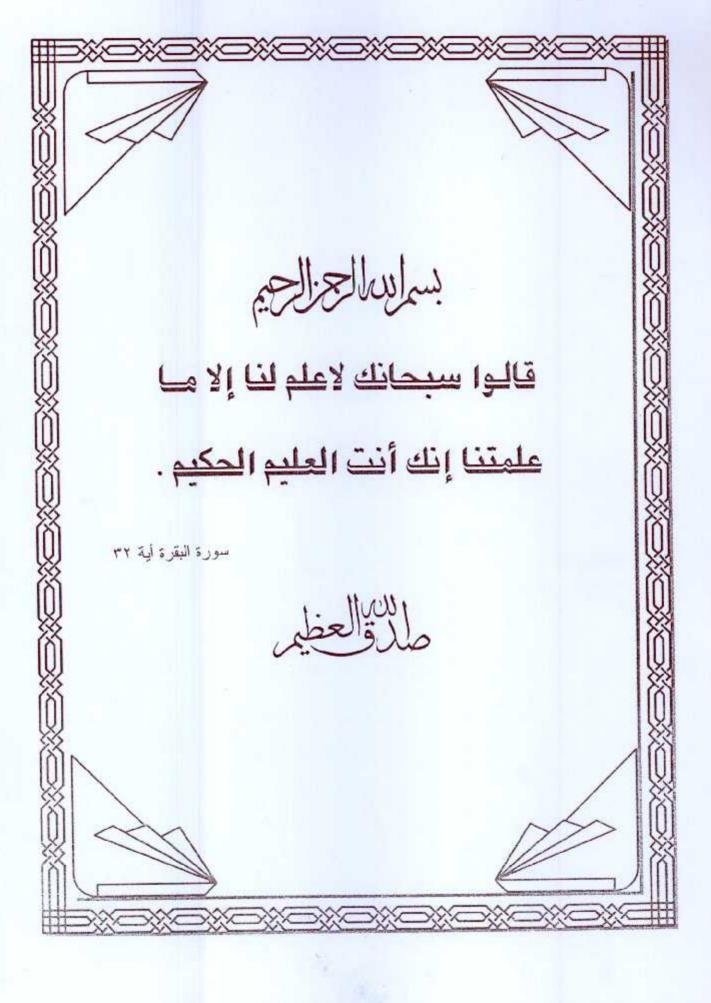
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لم ترد بالأصل

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Helium Neon Versus Gallium Aluminum Arsenide Laser Irradiation on Burn Wound Healing in Rats

By
Emad Tawfic Ahmed
M.Sc. in Physical Therapy

A Thesis
Submitted in Partial Fulfillment of the Requirement for Doctoral Degree in Physical Therapy

Faculty of Physical Therapy
Cairo University
2001

بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا إلا ما

علمتنا إنك أنت العليم الحكيم .

صدق الله العظيم

SUPERVISORS

PROF.DR.EMAM HASSAN EL NEGAMY
Professor of Physical Therapy
Dean of the Faculty of Physical Therapy
Faculty of Physical Therapy
Cairo University

PROF Dr.ADEL ABD EL HAMID NOSSIER
Assistant Professor in Physical Therapy
Chairman of Physical Therapy Department for
Surgery
Faculty of Physical Therapy
Cairo University

DR.GALILA MOHAMED ABD EL LATIF
Lecturer of Laser Physics
National Institute of Laser Physics
Cairo University

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The aim of this work were to explore the role of laser therapy application in burn wound healing acceleration and to detect the amount and frequency of laser therapy to decrease burn wound area. In this study 90 female albino rats, their mean age and weight were 6.49 ± 0.52 months and 179.96 ± 9.34 gram respectively. They were divided randomly into 3 equal groups: Group (1)(He-Ne group) 30 female albino rats which are further subdivided according to energy density into 3 equal group: group (I-A) which receive He-Ne laser at 1 J/cm^2, group (I-B) which receive He-Ne laser at 2 J/cm^2, and group (I-C) which receive He-Ne laser at 4 J/cm^2, Group (2)(Ga-Al-As group) 30 female albino rats which are further subdivided according to energy density into 3 equal group: group (II-A) which receive Ga-Al-As laser at 1 J/cm^2, group (II-B) which receive Ga-Al-As laser at 2 J/cm^2,and group (II-C) which receive Ga-Al-As laser at 4 J/cm^2, Group(3) (Control group) which doesn't receive any treatment. The result showed a significant difference between both groups and the control group regarding both WSA and colony count, also the best result obtained by He-Ne at intensity of 2 J/cm^2.

ACKNOWLEDGEMENT

Dedication

This work is dedicated to

My parents and

My fiancé

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LIST OF ABBERVIATIONS

He-Ne	Helium Neon
Ga-As	Gallium Arsenide
Ga-Al-As	Gallium Aluminum Arsenide
IR	Infra Red
mw	milli-watt
nm	nano-meter
Ant.	Anterior
Post.	Posterior
R.	Right
L.	Left
R.U.arm	Right Upper arm
L.U.arm	Left Upper arm
HO	Heterotopic ossification
NSAIDs	Non Steroidal Anti-Inflammatory drugs
LILT	Low Intensity Laser Therapy
ATP	Adenosine triphosphate
J/cm^2	Joule centimeter square
WSA	Wound Surface area
FDA	Food and Drug Association
IDE	Investigational Device Exemption
IRB	Institution Review Board
DNA	Deoxy ribonucleic acid
PG	Prosta-glandin
min	Minute

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