ENHANCEMENT OF EPISIOTOMY HEALING USING (790-805) nm DIODE LASER AS A SUPPLEMENTARY TREATMENT

A Dissertation
Submitted to the Institute of Laser for Postgraduate Studies
/ Baghdad University as a Partial Fulfilment of the Requirement
For the Degree of Diploma in Laser Application in
Medicine/Gynaecology

UçM

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2010 A.C **1431 H.C**

ABSTRACT:

Objective:

The objective of this study was to show the impact of 790-805 nm diode laser irradiations on wound healing as a supplementary treatment (biostimulation) in women underwent episiotomies, and to assess the laser parameters that were used to achieve that goal.

Material and methods:

Eighteen patients were included in this study; all of them underwent mediolateral episiotomy. Ten patients received laser therapy and eight patients were the control group. Laser used in this study is diode laser (K Laser) (790-805) nm in CW mode of operation. Spot size of 8mm, time for exposure for each spot was 30 seconds. The power used was 0.6 W .The power density for each spot of treatment was 1.19 W/cm^2 per session (non contact mode of application of laser therapy). Study group received 2 sessions of laser radiation, one session day 4, another on day 8 after labour of the same laser dose, and the women of both groups were followed on day 4,8,14 and 28 post delivery in terms of pain, tenderness, redness, oedema, and discharge.

Results:

after the 1^{st} exposure patients had been assessed (day 8 of delivery) pain present in 20% of the patients, tenderness in 30%, redness and oedema in 20% and 10% with discharge; which was less than the control group that had pain in 62.5% tenderness in 50%, redness and oedema in 50%, and discharge in 25%. After the 2^{nd} exposure (patients were assessed on day 14 post delivery) pain, tenderness and redness present only in 10%, while in the control group: pain, tenderness, oedema and discharge in 25%, and redness in 37%.

Conclusion:

1-Biostimulation is a method that can be used to enhance wound healing if used in appropriate parameters;

2-Diode laser (790-805) nm can be used for enhancing episiotomy healing as a supplementary therapy to enhance healing and reduce pain when used in cw mode with 0.6 w power and 1.19 w/cm^2 power density for 30 seconds for each spot. ## ABSTRACT:

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تعجيل شفاء جرح قص العجان باستخدام
نانومتر كعلاج - ليزر الدايود ٧٩٠ -805
مساعد

دراسة

مقدمة الى معهد الليزر للدراسات العليا / جامعة بغداد

كجزء من متطلبات نيل درجة الدبلوم العالي

في الليزرفي الطب /النسائية و التوليد

إعداد

سرى صلاح الدين سلمان

بكالوريوس طب و جراحة عامة/جامعة بغداد

دبلوم عالي في النسائية و التوليد/جامعة بغداد

زميلة الهيئة العراقية للاختصاصات الطبية/النسائية و التوليد

زميلة الهيئة العربية للاختصاصات الطبية /النسائية والتوليد

٢٠١٠ م

١٤٣١

هالخلاصة:

لتسريع - اجريت هذه الدراسة لمعرفة تأثير ليزر الدايود (٧٩٠-٨٠٥) نانومتر

. شفاء جرح العجان بأستخدام قدرة ٢ واط وبكثافة قدرة ٤ واط/سم ٢

ن رعتين م اء ج م اعط ان وت ص العج تم أختيار ١٨ سيدة جميعهن لديهن جرح ق

ل أشعاع الليزر لعشرة منهن وتم مقارنة احساسهن بالألم وعلامات الألتهابات مث

الأحمرار والودمة مع ٨ سيدات .

تم تقسيم النساء الى مجموعتان:

المجموعة الاولى (و هي المجموعة القياسية) تم علاجهن بواسطة المضادات الحيوية فقط دون اخضاعهن الى اشعة الليزر

والمجموعة الثانية (وهي المجموعة العلاجية) تم علاجهن بواسطة المضادات الحيوية مع اشعة الليزر وعلى شكل جرعتان اليوم الرابع واليوم الثامن ولمدة ٣٠ ثانية للمنطقة العلاجية الواحدة.

(٨٠٥- أظهرت النتائج ان أستخدام ليزرالدايود ذي الطول الموجي (٧٩٠ نانومتر أدى ألى تقليل أحساس السيدات بالألم مقارنة مع السيدات اللاتي لم يحصلن على أشعاع الليزر حتى بعد الجرعة الأولى.وآانت النتائج أآثر وضوحاً بعد الجرعة الثانية.

الاستنتاج:

من هذه الدراسة يمكن القول بأن أشعة الليزر يمكن ان تستخدم في تحفيز وتسريع شفاء جرح قص العجان, بالاضافة الى آونها عامل جيد في تخفيف الاحساس بالالم في موضع الجرح