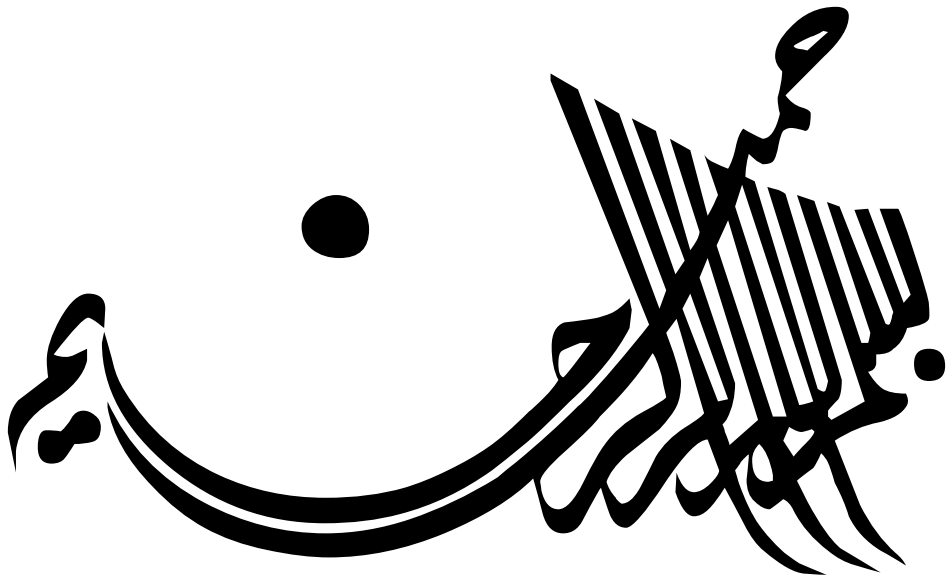

دانشگاه علوم پزشکی کرمان
و خدمات بهداشتی درمانی کرمان

دانشکده دندانپزشکی

پایان‌نامه جهت اخذ درجهٔ دکترای تخصصی در رشتهٔ

جراحی دهان، فک و صورت

عنوان

کارآزمایی بالینی تصادفی دوسوکور بر روی اثر کاربرد لیزر کم‌توان بر درد حاد و میزان باز شدن دهان در بیماران، پس از درمان بسته شکستگی کندیل

توسط

دکتر آرش بهاری بندری

استاد راهنما:

دکتر سعید حاج‌محمدی

استاد مشاور:

دکتر هدی مهرابی‌زاده هنرمند

شماره پایان‌نامه(۱۸۹ ت) سال تحصیلی ۱۳۹۸-۹۹

دانشگاه علوم پزشکی کرمان

دانشکده دندانپزشکی

« صورتجلسه دفاع از پایان نامه تحصیلی »

با تاییدات خداوند متعال جلسه دفاع از پایان نامه آقای آرش بهاری بندری برای دریافت درجه **دکترای تخصصی رشته جراحی دهان فک وصورت** تحت عنوان" کاررآمایی بالینی تصادفی دو سو کور بر روی کاربرد لیزر کم توان بر درد حاد و میزان باز شدن دهان در بیماران ، پس از درمان بسته شکستگی کندیل " در دانشکده دندانپزشکی دانشگاه علوم پزشکی به تاریخ 99/9/11 برگزار گردید. هیات داوران که قبلا پایان نامه ایشان را مطالعه نموده اند، پس از شنیدن دفاعیات و پرسشهای لازم از ایشان نتیجه را به شرح زیر اعلام می کنند . پایان نامه در وضعیت فعلی مورد قبول است و نامبرده نمره 18/74 با امتیاز بسیار خوب را دریافت نموده است.

هیات داوران	**امضاء**
استاد راهنما	دکتر سعید حاج محمدی
استاد مشاور	دکتر هدی صرابی زاده هنرمند
سرپرست تخصصی دانشکده	دکتر فاطمه السادات سجادی
معاون آموزشی	دکتر مریم السادات هاشمی پور
معاون پژوهشی	دکتر ملوک ترابی
استاد مدعو :	
دکتر سورنا فردیسی	

مراتب فوق مورد تایید است .

دکتر علی اسکندری زاده

رئیس دانشکده دندانپزشکی

دانشگاه علوم پزشکی کرمان
دانشکده دندانپزشکی

چکیده فارسی

سابقه و هدف: درد و محدودیت در باز کردن دهان از مشکلات شایع پس از تروما، شکستگی های کندیلی و درمانهای مرتبط با آن است که میتوانند بر میزان رضایت بیمار از نتیجه درمان اثرسؤیی بگذارد. داشتن پروتکلهای درمانی کارآمد جهت بازیابی فانکشن و کاهش درد پس از پروسه های جراحی در کوتاهترین زمان ممکن از اهمیت بالایی بر خوردار است. در سال‌های اخیر لیزر کم‌توان به عنوان یک مدالیته درمانی با حداقل عوارض جانبی در درمان دردهای حاد و مزمن مورد توجه کلینیسین‌ها و محققین قرار گرفته است. با وجود مطالعات بسیاری که بر روی اثر لیزر کم توان در کاهش درد و مشکلات بیماران پس از جراحی صورت گرفته است ، نتایج تحقیقات بسیار متناقض بوده و همچنان این سوال که استفاده از لیزر کم‌توان تا چه حد در درمان بیماران می تواند مفید واقع شود بدون پاسخ باقی مانده است. این تحقیق با هدف تعیین میزان اثر درمانی استفاده از لیزر کم توان بر روی درد حاد و میزان باز شدن دهان بیماران پس از درمان بسته شکستگی کندیل طراحی و انجام شد.

مواد و روش‌ها: این تحقیق به روش کارآزمایی بالینی تصادفی‌شده، دوسویه کوربعد از تصویب پروپوزال و تایید کمیته اخلاق گرفتن کد IRCT انجام شد. ۴۰ بیمار مرد و زن مراجعه کننده به بیمارستان باهنر کرمان، بخش جراحی دهان، فک و صورت که بر اساس معیارهای ورود و خروج از مطالعه ویژگی‌های لازم را داشتند با استفاده از نرم‌افزار کامپیوتری و به روش بلوکی به صورت تصادفی به دو گروه ۲۰ نفره دریافت کننده لیزر کم‌توان فعال (گروه مورد) و گروه دریافت کننده لیزرکم‌توان (گروه پلاسبو) تقسیم شدند. برای بیماران از لیزر gallium-aluminum-arsenide با طول موج 808nm ، با توان خروجی۱۰۰mw، انرژی در هر نقطه 3 J/cm2۲، برای ۲۰ ثانیه برای ۳ جلسه(۲۴، ۴۸ و ۷۲ ساعت بعد از جراحی) بر روی ۱۴نقطه خارج دهانی(۸نقطه روی عضله ماستر، ۲ نقطه پره اوریکولار، ۲ نقطه ژوگولوگاستریک و ۲ نقطه ساب مندیبل) هربار بر روی منطقه ای به وسعت 1.5cm2 از عضله درگیر استفاده شد. میزان حرکات طرفی فک بعد از باز کردن IMF توسط خط کش مندرج اندازه گیری شد. میزان درد بیماران در جلسه اول و بعد از باز کردن IMF توسط پرسشنامه VAS انجام شد. داده‌ها توسط نرم فزار SPSS نسخه 21 و آزمون‌های کای دو و repeated measurment انجام شد.

یافته‌ها: گروه‌های مطالعه از نظر سن و جنس هموژن بودند. گروه‌های درمانی از نظر میزان محدوده حرکتی اختلاف معنی‌داری وجود نداشت. نتایج مطالعه در خصوص شاخص VAS نشان داد متوسط VASدر گروه مورد (SD= ±1.387) 56.85 و در گروه پلاسبو (SD= ± 4.861) 60.95 است همچنین اختلاف بین گروه مورد و شاهد در انتهای مطالعه معنی دار بود. (P= 0.007).

بحث و نتیجه‌گیری: لیزر کم توان با توجه به نداشتن اثرات جانبی منفی و همچنین اثرات بیولوژیک بر کاهش التهاب و بهبود زخم میتواند در کنار درمان فیزیکی به عنوان یک درمان کمکی در بیماران جراحی بسته کندیل جهت کاهش زمان ترمیم و همچنین کاهش نیاز بیمار به داروهای مسکن بدون نگرانی مورد استفاده قرار گیرد.

کلمات کلیدی: شکستگی، مفصل فک، لیزر درمانی، لیزر کم‌توان، تراما

فهرست مطالب

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فهرست جداول

عنوان | شماره صفحه

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پیوست‌ها

Abstract

Introduction: temporomandibular joint (TMJ) fractures are one of the common types of maxillofacial fractures. Closed reduction is the popular method of treatmemt. The main goals of treatment are archiving normal function, occlusion and esthetic. To achieve normal occlusion and range of motion (ROM), short term maxillomandibular fixation (MMF) then early mobilization of the jaw, are the main consideration respectively. Pain and mouth openning limitation are post-operative consequences that may complicate the treatment results. to reduce inflammation, pain and to enhance healing process, Using Low level laser therapy (LLLT) is a method that has gained papularity in recent years. Due to conflict of result, Despite the promisins results of the studies on LLLT, the efficacy and standard protocol of laser therapy are still contraversial. The aim of this study was to evaluate the effect of LLLT on early post-operative pain and mouth openning limitation after closed reduction of tmporo mandibular joint fractures.

Methods and materials: the desing of this study was double blind randomized clinical trial. The study subjects were recruited from patients admitted to the Kerman university dentistry, department of oral and maxillofacial surgery. This study involved 40 patients with the diagnosis of TMJ fracture, divided into three groups base on lottery method of randomization. In intervention group subjects received LLLT (active laser) while control group patients received the placebo (inactive LLLT device). All subjects received standard treatment consisting closed reduction, MMF for 7 day then mobilization and stretching exercises, soft diet, heat and cold therapy. A gallium -aluminum-arsenide (GaAlAs; wavelength, 808 nm; duration, 20s; dosage, 3 J/cm^2; power, 300 mw) used in intervention group in 3 treatment sessions (24, 48 and 72hours post-operative). Prior to treatment, patients evaluated for pain with visual analog scale questionnaire (VAS), and pain and jaw range of motion evaluated after MMF discontinue.

Results: there were no significant differenec between to groups regarding rang of motion. In intervention group post MMF pain were significantly lower than control group ($p= 0.0007$).

Conclusion: using LLLT as an adjunctive therapy can lower the post-operative pain and enhancing thee pos-operative course of treatment in subcondylar fractures

Keywords : temporomandibular joint fracture, TMJ, subcondylar fracture, laser therapy, physical therapy, maxillomandibular fixation, low level laser therapy, LLLT, phoyotherapy

Kerman university of medical science

Faculty of dentistry

Thesis in partial fulfillment of the requirement for

The degree of specialty in Oral and Maxillofacial surgery

Title

Double-blind randomized clinical trial to evaluation of therapeutic effect of Low level laser rherapy on acute pain and post- operative mouth opening after Closed reduction of condylar fractur of lower jaw

by

Dr. Arash Bahari Bandari

Supervisor :

Dr. Saeed Hajmohammadi

Adviser :

Dr. Hoda Mehrabizadeh

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