Clinical Trial Protocol
Iranian Registry of Clinical Trials

25 Jun 2026

Comparing the effect of Red light LED (625 nm Wavelength) with white light LED on post- co2 laser wound healing

Protocol summary

Summary

The purpose of this study is Comparing the effect of Red light LED (625 nm Wavelength) with white light LED on post- co2 laser wound healing. Inclusion criteria: age over 15 years of age and under the age of 65; any patient that received equal fractional CO2 laser on both sides of face that due to acne scarring or rejuvenation; signature consent form; Exclusion criteria: age below 15 years and over 65 years; co2 laser with different parameters; wounds are not very standard and good for study; on both sides of face the energies and the number of laser passes are not the same and the wounds on both sides of the face are not same; this study will be performed as a randomized clinical trial in Tehran. 20 patients between 15 to 65 years after having a laser in the form of wounds that are similar, will be selected through available sampling and dermatologist consultation. Patients will first be examined by a specialist physician and will be introduced if they are eligible to enter the study. To modify any potential confounding in the study, any person who participated in the study will be in the control group also in the intervention group. In that way, one side of the face will be intervention and one side of the face will be controlled. Everyone has a red LED (interference) LED lamp and an LED lamp with white light (flashlight) without heat generation (laser and laser shading). The appearance of both will be the same and will only be number one and two. We ask the person to use the device number 1 only on the right side of face and the device number 2 on the left side of face. we will ask the patient to use the devices twice daily in the morning and at night each time for 5 minutes for seven days. It is necessary to explain that for both sides of the face, the usual treatments are in the form of topical ointment mupirocin twice daily in the morning and in the evening and oral capsule cephalexin 500 mg every 6 hours to 3 days and oral tablet acyclovir 400 mg every 8 hours to three days is used; in fact, red light will only be added to the routine treatment. It is expected that if there is a change in the wound healing process, it is because of Red LED Light. Starting day was considered zero, the wound will be taken on this day and on days 3, 5 and 7 (size of wound length and width) with using a digital camera.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201710048146N25**
Registration date: **2017-10-14, 1396/07/22**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2017-10-14, 1396/07/22

Registrant information

Name

Mohammadreza Razaghi

Name of organization / entity

Laser application in medical sciences research center

Country

Iran (Islamic Republic of)

Phone

+98 21 2271 8021

Email address

laser.cntr@sbmu.ac.ir

Recruitment status

Recruitment complete

Funding source

Shahid Beheshti University of Medical Sciences

Expected recruitment start date

2017-07-23, 1396/05/01

Expected recruitment end date

2018-02-20, 1396/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing the effect of Red light LED (625 nm Wavelength) with white light LED on post- co2 laser wound healing

Public title

Comparing the effect of Red light with white light on post- co2 laser wound healing

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: age over 15 years of age and under the age of 65; any patient that received equal fractional CO2 laser on both sides of face that due to acne scarring or rejuvenation; signature consent form; Exclusion criteria: age below 15 years and over 65 years; co2 laser with different parameters; wounds are not very standard and good for study; on both sides of face the energies and the number of laser passes are not the same and the wounds on both sides of the face are not same;

Age

From **15 years** old to **65 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Organizational committee of ethics in biomedical research Shahid Beheshti University of Medical Scie

Street address

Next to Ayatollah Taleghani Hospital, Shahid Arabi ST. Yemen street, Shahid Chamran highway, Tehran

City

Tehran

Postal code

Approval date

2017-09-17, 1396/06/26

Ethics committee reference number

IR.SBMU.REC.1396.138

Health conditions studied

1

Description of health condition studied

co2 laser wounds

ICD-10 code

L59

ICD-10 code description

Other disorders of skin and subcutaneous tissue related to radiation

Primary outcomes

1

Description

Wound healing rate

Timepoint

Day 3, Day 5, Day 7 after treatment

Method of measurement

Camera and visio face

Secondary outcomes

empty

Intervention groups

1

Description

Control group: On one side of the face with a light-emitting diode (flashlight) lamp without heat, twice a day in the morning and at night 5 minutes for seven days. Normal treatment is in the form of topical mupirocin ointment One day twice in the morning and in the evening, and oral cefalexin 500 mg every 6 hours to 3 days and oral acyclovir 400 mg every 8 hours to 3 days.

Category

Placebo

2

Description

Intervention group: On the other side of the face with a red light LED (intervention), twice daily in the morning and at night,5 minutes for seven days . Normal treatment is performed simultaneously with topical mupirocin ointment twice a day In the morning and at night and oral capsules Cephalexin 500 mg every 6

hours to 3 days and oral tablet Acyclovir 400 mg every 8 hours to 3 days.

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Laser Application Research Center in Medical Sciences

Full name of responsible person
Dr.Behrouz Barikbin

Street address
Shohadaye Tajrish Hospital, Tajrish, Tehran

City
Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice chancellor for research,Shahid Beheshti University of Medical Sciences

Full name of responsible person
Dr Afshin Zarghi

Street address
Next to Ayatollah Taleghani Hospital, Shahid Arabi ST. Yemen street, Shahid Chamran highway, Tehran

City
Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
Vice chancellor for research,Shahid Beheshti University of Medical Sciences

Proportion provided by this source
100

Public or private sector
empty

Domestic or foreign origin
empty

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
empty

Person responsible for general inquiries

Contact

Name of organization / entity
Laser Application Research Center in Medical Science

Full name of responsible person
Dr.Behrooz Barikbin

Position
dermatologist

Other areas of specialty/work

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Person responsible for scientific inquiries

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Person responsible for updating data

Contact

Name of organization / entity
Laser Application Research Centre in Medical Sciences

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Dr.Behrooz Barikbin

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty
Study Protocol
empty
Statistical Analysis Plan
empty
Informed Consent Form
empty
Clinical Study Report
empty
Analytic Code
empty
Data Dictionary
empty