Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of early fractional CO2 Laser in post surgical incision treatment in patients

Protocol summary

Study aim
The effect of early carbon dioxide laser in post surgical incision treatment in plastic surgeries

Design
including 20 patients with parallel groups who were candidates for cosmetic surgery with incisions on both sides of the body. For each patient, one side is co2 lasered and the other side is left alone. Randomization to choose the laser side will be done using a table of random numbers. If a couple comes, the right side will be lasered, and if an individual comes, the left side will be lasered. After that, for double blinding, the laser prop will be placed on both sides so that the patient does not notice. Also, after six months of examining the patients, the evaluator and the examiner are not aware of the lasered side.

Settings and conduct
Patients in the laser department of Hazrat Fatemeh Hospital in two stages, including the first week and the fourth week after the surgery, are subjected to intervention for the surgical incision site with a carbon dioxide laser, and due to the double-blind nature of the study, the laser prop is applied to both sides of the surgical site. then six months after the completion of the laser, they are examined by other doctors and evaluated with the VSS criteria, and the results are analyzed by other people.

Participants/Inclusion and exclusion criteria
Inclusion criteria; Cosmetic surgery for both sides of the body or surgical incisions longer than fifteen centimeters Exclusion criteria; Existence or history of skin disease

Intervention groups
The intervention group includes patients who are candidates for plastic surgery who have undergone surgery that had incisions on both sides of the body, and their surgical incisions were performed in two stages; In the first and fourth week after surgery,CO2 laser was used to check the effect of scar reduction.

Main outcome variables
Pigmentation Vascularity Pliability Height By the Vancouver scar scale

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20230412057887N1**
Registration date: **2023-06-26, 1402/04/05**
Registration timing: **registered_while_recruiting**

Last update: **2023-06-26, 1402/04/05**
Update count: **0**

Registration date
2023-06-26, 1402/04/05

Registrant information

Name
abbas nasiri golibeghloo

Name of organization / entity

Country
Iran (Islamic Republic of)

Phone
+98 21 6522 4891

Email address
abbas.nas57@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-04-24, 1402/02/04

Expected recruitment end date
2023-10-26, 1402/08/04

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The effect of early fractional CO2 Laser in post surgical incision treatment in patients

Public title
Laser effect on surgical incision site
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Cosmetic surgery with incisions on both sides of the body or incisions larger than 15 cm
Exclusion criteria:
History or current skin disease
Age
No age limit
Gender
Both

Phase
N/A
Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size
Target sample size: **20**
Randomization (investigator's opinion)
Randomized
Randomization description
Simple randomized To select people for laser surgery on the left or right side, it is done using a table of random numbers, if an even number occurs for them, the laser will be on the right side, and for those with an odd number, the laser will be on the left side.
Blinding (investigator's opinion)
Double blinded
Blinding description
Patient ; In bilateral incisions, on both sides and in incisions larger than fifteen centimeters, the laser prop is placed on the entire incision so that the patient does not notice the direction of the laser part. Evaluating doctors; Other doctors, when the patient goes to them and conducts a clinical examination and compares the incisions on both sides, or compares the left side with the right side of the wound based on the vss table, points are given without knowing the lasered and non-laser side. analyzer; The person who analyzes the tables and statistics does not know the side that was lasered for each patient
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee of Iran University of Medical Sciences
Street address
Tehran , highway hemmat , Next to Milad Tower ، Iran university of medical science
City
Tehran
Province
Tehran
Postal code
1449614535
Approval date
2021-06-14, 1400/03/24
Ethics committee reference number
IR.IUMS.FMD.REC.1400.198

Health conditions studied

1

Description of health condition studied
Plastic Surgery
ICD-10 code
Z41.1
ICD-10 code description
Encounter for cosmetic surgery

Primary outcomes

1

Description
Pigmentation
Timepoint
Six month after laser
Method of measurement
The Vancouver scar scale

Secondary outcomes

1

Description
Vascularity
Timepoint
Six months after laser
Method of measurement
The Vancouver scar scale

2

Description
Pilability
Timepoint
Six months after laser

Method of measurement
The Vancouver scar scale

3

Description
Height of Scar
Timepoint
Six months after laser
Method of measurement
The Vancouver scar scale

Intervention groups

1

Description
Intervention group: In this group, there are 20 patients who, after bilateral cosmetic surgery (a surgery that leaves scars on both sides of the body), are lasered in two stages of their surgical incision by fractional CO2 laser, so that its effect can be compared with the other side, which is healed naturally. . This intervention in two stages; It will be done in the first and fourth week after surgery. During the laser, the laser prop is placed on all incisions so that the patient does not notice the direction of the laser. After six months, the patient is examined in the clinic and the scar condition of the incisions is compared.
Category
Treatment - Other

2

Description
Control group: In this group, there are 20 patients who, after bilateral cosmetic surgery (a surgery that leaves scars on both sides of the body), were only touched by the laser probe in the two stages of the surgery, and the laser was not performed on the other side, which healed naturally. This intervention in two stages; It will be done in the first and fourth week after surgery. During the laser, the laser prop is placed on all incisions so that the patient does not notice the direction of the laser. After six months, the patient is examined in the clinic and the scar condition of the incisions is compared.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Fatima hospital
Full name of responsible person
Abbas Nasiri
Street address
Jahan ara street forty one avenue no 3
City
Tehran
Province
Tehran
Postal code
1436643891
Phone
+98 21 6522 4891
Email
Abbas.nas57@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Iran University of Medical Sciences
Full name of responsible person
Reza Falak
Street address
Iran University of Medical Sciences, Hemmat Highway
City
Tehran
Province
Tehran
Postal code
1449614535
Phone
+98 21 8670 2504
Email
Reza.falak@iums.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Iran University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Public
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Iran University of Medical Sciences
Full name of responsible person
Abbas Nasiri
Position
Assistant professor
Latest degree
Subspecialist
Other areas of specialty/work
Plastic surgery

Street address
Jahan ara street, forty one avenue , no 3
City
Tehran
Province
Tehran
Postal code
1436643891
Phone
+98 21 6522 4891
Email
Abbas.nas57@gmail.com

Person responsible for scientific inquiries

Contact
Name of organization / entity
Iran University of Medical Sciences
Full name of responsible person
Abbas Nasiri
Position
Assistant professor
Latest degree
Subspecialist
Other areas of specialty/work
Plastic surgery
Street address
Jahan ara street, forty one avenue , no 3
City
Tehran
Province
Tehran
Postal code
1436643891
Phone
+98 21 6522 4891
Email
Abbas.nas57@gmail.com

Person responsible for updating data

Contact
Name of organization / entity
Iran University of Medical Sciences
Full name of responsible person
Abbas nasiri
Position
Assistant Professor
Latest degree
Subspecialist
Other areas of specialty/work
Plastic surgery
Street address
Jahan ara street , forty one avenue , no 3
City
Tehran
Province
Tehran
Postal code
1436643891
Phone
+98 21 6522 4891
Email
Abbas.nas57@gmail.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Not applicable
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Not applicable
Data Dictionary
Not applicable