

Clinical Trial Protocol

Iranian Registry of Clinical Trials

31 May 2026

Efficacy and side effects of Er:YAG laser in combination with Nd:YAG laser in the treatment of acne scars and comparing it with Er:YAG laser alone in the treatment of atrophic acne scars

Protocol summary

Study aim

Proposing a newer and more effective treatment method in the treatment of atrophic acne scars

Design

In this study, 20 patients with atrophic acne scars on both sides of the face were included in the study. One side of the patient's face is treated with Er:yag laser alone and the other side is treated with a combination of Er:yag and Nd:yag lasers.

Settings and conduct

This study is conducted in Razi Hospital laser clinic between 2022 and 2024. In this study, 20 patients with atrophic acne scars on both sides of the face were included in the study. One side of the patient's face is treated with Er:yag laser alone and the other side is treated with a combination of Er:yag and Nd:yag lasers. All patients and dermatologists evaluating the result are unaware of the type of laser received on both sides of the face. The results of recovery and complications are evaluated by Visioface and the ECCA criteria and the satisfaction percentage of the patients themselves.

Participants/Inclusion and exclusion criteria

Inclusion criteria: patients over 18 years old with mild to moderate scarotrophic acne on both sides of the face
Exclusion criteria: pregnancy, history of isotretinoin use and performing invasive procedures such as subcision, dermabrasion, peeling, and laser on the cheeks in one month the past

Intervention groups

One side of the patient's face is treated with Er:yag laser alone and the other side is treated with a combination of Er:yag and Nd:yag lasers, and the effects of both are compared.

Main outcome variables

Depth and size and number of acne scars in laser therapy

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20221031056355N1**

Registration date: **2022-12-07, 1401/09/16**

Registration timing: **registered_while_recruiting**

Last update: **2022-12-07, 1401/09/16**

Update count: **0**

Registration date

2022-12-07, 1401/09/16

Registrant information

Name

sareh zanjani

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 915 349 8079

Email address

sarazanjani@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-11-04, 1401/08/13

Expected recruitment end date

2023-11-04, 1402/08/13

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Efficacy and side effects of Er:YAG laser in combination with Nd:YAG laser in the treatment of acne scars and comparing it with Er:YAG laser alone in the treatment of atrophic acne scars

Public title

Effect of laser in treatment of acne scars

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients over 18 years old with mild to moderate acne atrophic scars on both sides of the face

Exclusion criteria:

A history of performing invasive procedures on the skin in the last month pregnancy history of keloid lactation Presence of active acne photosensitivity History of taking Rovacutan in the last month

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size

Target sample size: **20**

More than 1 sample in each individual

Number of samples in each individual: **2**

One side of the face is treated with Er:yag laser and the other side is treated with a combination of Er:yag and Nd:yag lasers

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

In this study, the patients and the dermatologist evaluating the outcome are unaware of which type of laser was used on which side of the face

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committee of Tehran University

Medical School Community Verified icon

Street address

vahdateslami street .razi hospital

City

tehran

Province

Tehran

Postal code

1199663911

Approval date

2022-10-21, 1401/07/29

Ethics committee reference number

IR.TUMS.MEDICINE.REC.1401.546

Health conditions studied

1

Description of health condition studied

Acne scar

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Severity of acne scars based on The ECCA grading scale (échelle d'évaluation clinique des cicatrices d'acné)

Timepoint

Examining the severity of acne scars based on the criteria determined before the start of the intervention and after the fourth laser session (4 sessions with an interval of one month)

Method of measurement

Based on the famous ECCA acne severity scoring table

2

Description

Visioface images to determine the number of skin pores

Timepoint

Examining the severity of acne scars based on the criteria determined before the start of the intervention and after the fourth laser session (4 sessions with an interval of one month)

Method of measurement

visioface device

Secondary outcomes

1

Description

Investigation of laser side effects such as erythema

Timepoint

After each laser session (4 sessions with an interval of one month)

Method of measurement

Visual observation

Intervention groups

1

Description

Intervention group: on one side of the face of patients with etheroic acne scars, Er:yag laser with the number of 4 sessions at an interval of one month and checking the results one month after the fourth session.

Category

Treatment - Other

2

Description

The intervention group: On the other hand, the study group received Er:yag and Nd:yag lasers for four sessions with an interval of one month, and the results were checked one month after the last session.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Razi Hospital Laser Clinic

Full name of responsible person

sareh zanjani

Street address

vahdat eslami street razi hospital

City

tehran

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Postal code

1199663911

Phone

+98 915 349 8079

Email

sarazanjani@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

.Vice President of University Research and Technology

Street address

vahdateslamistreet,razi hospital

City

tehran

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1199663911

Phone

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Email

sarazanjani@yahoo.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Tehran University of Medical Sciences

Proportion provided by this source

50

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

Tehran University of Medical Sciences

Full name of responsible person

sareh zanjani

Position

resident

Latest degree

Medical doctor

Other areas of specialty/work

Dermatology

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

sareh zanjani

Position

resident

Latest degree

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Person responsible for updating data

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Full name of responsible person

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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

Undecided - It is not yet known if there will be a plan to make this available

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

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available