

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

Evaluation the effect of adipose derived stem cells conditioned medium (ADSC-CM) on rejuvenation after resurfacing with ablative fractional carbon dioxide laser

Protocol summary

Study aim

Evaluation the effect of adipose derived stem cells conditioned medium (ADSC-CM) on rejuvenation after resurfacing with ablative fractional carbon dioxide laser

Design

Clinical trial with a control group and an intervention group, with parallel groups, double-blind, randomized based on random number table, phase 1 on 10 patients with moderate and severe wrinkles

Settings and conduct

This project is carried out in the Dermatology and Stem Cell Research Center of Tehran University of Medical Sciences. One group is treated with laser and adipose derived stem cells conditioned medium topically and the other group is treated with laser and PRP topically.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Age between 20-60; Having moderate wrinkles on the face. Exclusion criteria: Pregnancy and breastfeeding; Active infection in face; Using any injectable fillers on the face in the last six months

Intervention groups

Intervention group: A group treated with laser and adipose derived stem cells conditioned medium is placed topically. Control group: The other group is treated with laser and PRP topically.

Main outcome variables

The amount of wrinkles; side effects; patient's satisfaction

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200127046282N19**

Registration date: **2022-06-06, 1401/03/16**

Registration timing: **prospective**

Last update: **2022-06-06, 1401/03/16**

Update count: **0**

Registration date

2022-06-06, 1401/03/16

Registrant information

Name

Sona Zare

Name of organization / entity

Skin and Stem Cell Research Center, Tehran
University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 2665 7438

Email address

sonazarebio@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-06-20, 1401/03/30

Expected recruitment end date

2022-09-21, 1401/06/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation the effect of adipose derived stem cells conditioned medium (ADSC-CM) on rejuvenation after resurfacing with ablative fractional carbon dioxide laser

Public title

Evaluation of clinical improvement of conditioned media

of adipose derived stem cells in the treatment of wrinkles in the facial skin

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age between 20-60 Having middle wrinkles in face region

Exclusion criteria:

Pregnancy and breastfeeding History of cancer Patients with a new history of gel and Botox injections People with Mental Disorders Active infection in the face

Age

From **20 years** old to **60 years** old

Gender

Both

Phase

1

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

In each session, immediately after fractional laser, adipose-derived stem cells conditioned medium are used in one group and PRP is used in the other group after laser.

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 of Medical Sciences

Street address

Keshavarz blvd, Tehran University of Medical Sciences

City

Tehran

Province

Tehran

Postal code

1937957511

Approval date

2022-02-21, 1400/12/02

Ethics committee reference number

IR.TUMS.MEDICINE.REC.1400.1412

Health conditions studied

1

Description of health condition studied

Skin aging

ICD-10 code

L90.9

ICD-10 code description

Atrophic disorder of skin

Primary outcomes

1

Description

The amount of wrinkles

Timepoint

Before treatment and six month after the last session

Method of measurement

Visio face

Secondary outcomes

1

Description

Inflammation

Timepoint

After each session

Method of measurement

Questionnaire and visit

2

Description

Intensity of pain

Timepoint

Treatment time

Method of measurement

Questionnaire and visit

Intervention groups

1

Description

Intervention group: After adequate anesthesia, a group is first treated with laser and then the stem cells conditioned medium is applied topically to the wrinkle site for one hour. This method is repeated 3 times with 4 week intervals.

Category

Treatment - Other

2

Description

Control group: After adequate anesthesia, a group is first treated with laser and then the PRP is applied topically to the wrinkle site for one hour. This method is repeated 3 times with 4 week intervals.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Clinic of Skin and Stem cell Research Center of Tehran University of Medical Sciences

Full name of responsible person

Mohammad Ali Nilforoushzadeh

Street address

No 4, Maryam Alley, South Kamraniyeh Street, Tehran, Iran

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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Full name of responsible person

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Grant name

Grant code / Reference number

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

Yes

Title of funding source

Skin and Stem cell Research Center of Tehran 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

Skin and Stem cell Research Center of Tehran University of Medical Sciences

Full name of responsible person

Sona Zare

Position

Researcher

Latest degree

Ph.D.

Other areas of specialty/work

Cellular and Molecular biology

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Person responsible for scientific inquiries

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Name of organization / entity

Skin and Stem cell Research Center of Tehran University of Medical Sciences

Full name of responsible person

Mohammad Ali Nilforoushzadeh

Position

Professor

Latest degree

Specialist

Other areas of specialty/work

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Person responsible for updating data

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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

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