Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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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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Professor

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Dermatology

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researcher

Latest degree

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Other areas of specialty/work

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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