Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Comparison between efficacy of SVF (Stromal-Vascular Fraction) on nanofat effect with nanofat on healing of acne scar

Protocol summary

Study aim

Comparison between efficacy of SVF (Stromal-Vascular Fraction) on nanofat effect with nanofat on healing of acne scar

Design

This study is performed on 10 patients with acne scars. After obtaining sufficient anesthesia, the treatment areas of the patients' scars on both sides of the face are treated with nanofiber. Immediately after the nanowire, one side of the patient's face (intervention group) is injected with adipose tissue-derived vascular stromal cells, and the other side of the face (control group) is injected with nanofeed. All patients are photographed by digital camera before treatment and in each visit. To determine the extent of improvement and compare the two sides of the face, at the end of the study, photos of patients are examined by two neutral dermatologists. Patient satisfaction is also recorded and the results are compared.

Settings and conduct

This design is done at the skin and stem cell research center of Tehran university of medical sciences and without the patient's knowledge, after the nanofat, SVF cells are injected on one side of the face and nothing is injected on the other side of the scar area.

Participants/Inclusion and exclusion criteria

Inclusion criteria: two to three acne scars. Exclusion criteria: Age under 18, family history of bleeding or coagulant diseases, use of anticoagulants or steroids, blood hemoglobin less than 10 and platelet count less than 150, presence of active skin or systemic infection, malignancy or history of receiving chemotherapy , Breastfeeding or pregnancy.

Intervention groups

Intervention group: One side of the face is treated with nanoparticles and vascular stromal cells derived from adipose tissue by injection. Control group: The other side of the face is treated with Nanoft.

Main outcome variables

scar's surface; side effects; patient's satisfaction

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200127046282N7**
Registration date: **2022-03-26, 1401/01/06**
Registration timing: **prospective**

Last update: **2022-03-26, 1401/01/06**
Update count: **0**

Registration date

2022-03-26, 1401/01/06

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

2022-04-19, 1401/01/30

Expected recruitment end date

2022-08-21, 1401/05/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison between efficacy of SVF (Stromal-Vascular Fraction) on nanofat effect with nanofat on healing of acne scar

Public title

Comparison between efficacy of SVF on nanofat effect with nanofat on healing of acne scar

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Acne scar grade 2 to 3 skin

Exclusion criteria:

Age under 18 years Family history of bleeding or coagulant diseases Taking anticoagulants or steroids Blood hemoglobin less than 10 and platelet count less than 150 Existence of active skin or systemic infection Having a malignancy or a history of receiving chemotherapy Breastfeeding or pregnancy

Age

From **18 years** old to **50 years** old

Gender

Both

Phase

1

Groups that have been masked

No information

Sample size

Target sample size: **10**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Patients and physicians will not know the type of treatment, but the evaluator will know the type of patient treatment. Therefore, the study will be conducted blindly.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Tehran University of Medical Sciences

Street address

Tehran University of Medical Sciences, Keshavarz blvd.

City

Tehran

Province

Tehran

Postal code

1937957511

Approval date

2021-09-22, 1400/06/31

Ethics committee reference number

IR.TUMS.MEDICINE.REC.1400.711

Health conditions studied

1

Description of health condition studied

atrophic scar

ICD-10 code

L90.5

ICD-10 code description

Scar conditions and fibrosis of skin

Primary outcomes

1

Description

Scar size

Timepoint

before and 3 month after the intervention

Method of measurement

visio face

Secondary outcomes

1

Description

Side effects

Timepoint

One week after treatment

Method of measurement

Questionnaire and visit

2

Description

Patient Satisfaction

Timepoint

Three month after treatment

Method of measurement

Questionnaire

Intervention groups

1

Description

Control group: (Other side of face) After sufficient anesthesia, treatment with nanofat.

Category

Treatment - Other

2

Description

Intervention group: One side of the face after being anesthetized, is first treated with nanofat, and then adipose derived Stromal Vascular Fraction (SVF) cells is injected in the scars.

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

Elham Behrangi

Street address

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

City

Tehran

Province

Tehran

Postal code

1937957511

Phone

+98 21 2665 7438

Email

elham.behrangi@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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

Full name of responsible person

Mohammad Ali Nilforoushzadeh

Street address

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

City

Tehran

Province

Tehran

Postal code

1937957511

Phone

+98 21 2665 7438

Email

nilforoosh@sina.tums.ac.ir

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, 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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Postal code

1937957511

Phone

+98 21 2665 7438

Email

sonazarebio@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

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

Full name of responsible person

Elham Behrangi

Position

assistant Professor

Latest degree

Specialist

Other areas of specialty/work

Dermatology

Street address

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

City

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1937957511

Phone

+98 21 2665 7438

Email

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Person responsible for updating data

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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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