

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

03 Jun 2026

### Comparison of the efficacy of microneedle radiofrequency combined with subcision vs microneedle radiofrequency alone in treatment of depressed acne scar

#### Protocol summary

##### Summary

Patients received microneedle radiofrequency on both sides of their faces during three sessions. There was a 4-week interval between each two sessions. Objectives: To compare the efficacy of microneedle radiofrequency in combination with subcision and microneedle radiofrequency alone in the treatment of depressed acne scars. Design: Randomized, single blind, clinical trial. Setting and Conduct: In this study, 25 patients were selected for acne scar treatment and primary data were collected and then eligible patients received subcision on one side of the face chosen randomly (Using random numbers table). After 2 weeks, Patients received microneedle radiofrequency on both sides of their faces during three sessions. There was a 4-week interval between each two sessions. Outcome measures were assessed by two dermatologists blinded to the randomization through serial photography at baseline and 3 months after the last therapy session. Inclusion criteria: Age  $\geq$  18 years; patient suffering from polymorphic and mixed acne scars; presence of acne scars on both sides of the face; Fitzpatrick skin types 2 to 4; informed consent for participation. Exclusion Criteria: presence of hypertrophic or Keloid scars. Conduct and interventions: Intervention group: in one side of the face, subcision was done and after 2 weeks, the process of treatment was followed by three sessions of microneedle radiofrequency. There was a 4-week interval between each two sessions. Control group: the other side of the face received microneedle radiofrequency without subcision during three sessions. There was a 4-week interval between each two sessions. Main Outcome Measures: Improvement of acne scar assessed by two dermatologists blinded to the randomization process (through serial photography).

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2016103130597N1**  
Registration date: **2017-01-26, 1395/11/07**  
Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2017-01-26, 1395/11/07

##### Registrant information

##### Name

Nazila Poostiyan

##### Name of organization / entity

Isfahan University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 31 3335 0079

##### Email address

n.poostiyan@resident.mui.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice Chancellor for research of Isfahan University of Medical Sciences

##### Expected recruitment start date

2015-11-06, 1394/08/15

##### Expected recruitment end date

2016-11-05, 1395/08/15

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**

empty

**Scientific title**

Comparison of the efficacy of microneedle radiofrequency combined with subcision vs microneedle radiofrequency alone in treatment of depressed acne scar

**Public title**

Efficacy of microneedle radiofrequency with or without subcision for treatment of depressed acne scar

**Purpose**

Treatment

**Inclusion/Exclusion criteria**

Inclusion criteria: Age  $\geq$  18 year; patient suffering from polymorphic and mixed acne; the acne scars should be in both sides of the face; Fitzpatrick skin types 2 to 4; informed consent for participation in the study. Exclusion Criteria: patients who are suffering from hypertrophic or Keloid scars.

**Age**

From **18 years** old

**Gender**

Both

**Phase**

2

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **25**

**Randomization (investigator's opinion)**

Randomized

**Randomization description****Blinding (investigator's opinion)**

Single blinded

**Blinding description****Placebo**

Not used

**Assignment**

Parallel

**Other design features**

In this study randomization was done based on random numbers table.

**Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics committee of Isfahan University of Medical Sciences

**Street address**

Deputy of research of Isfahan University of Medical Sciences, Hezar jerib Avenue, Isfahan.

**City**

Isfahan

**Postal code****Approval date**

2016-07-25, 1395/05/04

**Ethics committee reference number**

IR.MUI.REC.1395.3.325

**Health conditions studied****1****Description of health condition studied**

acne scar

**ICD-10 code**

L90.5

**ICD-10 code description**

Scar conditions and fibrosis of skin

**Primary outcomes****1****Description**

Atrophic scar of acne

**Timepoint**

Baseline,three months after the last therapy session

**Method of measurement**

Serial photography and evaluation by two dermatologists blinded to the randomization process

**Secondary outcomes****1****Description**

Edema; Erythema; Pruritis; Hypo and Hyper pigmentation

**Timepoint**

After two weeks of each therapy session

**Method of measurement**

Patient self administered checklist of overall satisfaction

**2****Description**

Clinical improvement of atrophic scar

**Timepoint**

Baseline,three months after the last therapy session

**Method of measurement**

Serial photography and evaluation by two dermatologists blinded to the randomization process

**3****Description**

Patients satisfaction

**Timepoint**

Three months after the last therapy session

**Method of measurement**

Patient self administered checklist of overall satisfaction

**Intervention groups**

## 1

### Description

Intervention group: in one side of the face, subcision was done and after 2 weeks, the process of treatment was followed by three sessions of microneedle radiofrequency. There was a 4-week interval between each two sessions.

### Category

Treatment - Devices

## 2

### Description

Control group: the other side of the face received microneedle radiofrequency without subcision during three sessions. There was a 4-week interval between each two sessions.

### Category

Treatment - Devices

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Alzahra general hospital

##### Full name of responsible person

Dr Nazila Poostiyan

##### Street address

Department of Dermatology, Al-Zahra Hospital, Isfahan

##### City

Isfahan

### 2

#### Recruitment center

##### Name of recruitment center

Skin disease and Leishmaniasis Research Center

##### Full name of responsible person

Dr Nazila Poostiyan

##### Street address

Skin disease and Leishmaniasis Research Center, KHorram street, Isfahan

##### City

Isfahan

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Vice Chancellor for research of Isfahan University of Medical Sciences

##### Full name of responsible person

Dr.Mehdi Nematbakhsh

##### Street address

Deputy of Research of Isfahan University of Medical Sciences, Hezar Jerib Avenue, Isfahan

##### City

Isfahan

##### Grant name

##### Grant code / Reference number

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

Yes

##### Title of funding source

Vice Chancellor for research of Isfahan University of Medical Sciences

##### Proportion provided by this source

100

##### Public or private sector

empty

##### Domestic or foreign origin

empty

##### Category of foreign source of funding

empty

##### Country of origin

##### Type of organization providing the funding

empty

## Person responsible for general inquiries

### Contact

#### Name of organization / entity

Skin disease and Leishmaniasis Research Center, Isfahan University of Medical Sciences,

#### Full name of responsible person

Dr Nazila Poostiyan

#### Position

Assistant of dermatology

#### Other areas of specialty/work

#### Street address

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#### Postal code

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+98 31 3668 5555

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n.poostiyan@resident.mui.ac.ir

#### Web page address

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

Skin disease and Leishmaniasis Research Center, Isfahan University of Medical Sciences, Isfahan, Ira

#### Full name of responsible person

Dr Gita Faghihi

#### Position

professor

#### Other areas of specialty/work

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## Person responsible for updating data

### Contact

**Name of organization / entity**  
Skin disease and Leishmaniasis Research Center,  
Isfahan University of Medical Sciences  
**Full name of responsible person**  
Dr Nazila Poostiyan  
**Position**  
Assistant of Dermatology  
**Other areas of specialty/work**  
**Street address**  
Department of Dermatology, Al-Zahra Hospital, Soffeh  
Blvd, Isfahan University of Medical Sciences  
**City**  
Isfahan

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

*empty*

### Study Protocol

*empty*

### Statistical Analysis Plan

*empty*

### Informed Consent Form

*empty*

### Clinical Study Report

*empty*

### Analytic Code

*empty*

### Data Dictionary

*empty*