

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 May 2026

Compare the effect of silver nano spray and silver sulfadiazine 1% on wound healing in burns.

Protocol summary

Summary

The purpose of the present study was to compare the healing effects of silver nano spray and silver sulfadiazine on second-degree burns. A sample of 42 participants were selected for the study from among the patients arriving at the hospital using the following inclusion criteria: 1) they suffered from burns caused by liquids (but not by acids) or a heating source, 2) they had burns on two separate parts of the body with similar depth, 3) they were between 18 and 60 years of age, 4) they showed no indication of diabetes, cardiovascular diseases, or skin allergy, nor did they suffer defects or problems in their immune system. The participants were excluded from the study if they showed their discontent for any possible reason. After the patients with a second-degree burn arrived at the hospital, a specialist examined their burns and gave them a score using Bates and Johnson instrument (test). After it was cleansed by sterile saline, the burn was divided into two equal halves. The first half was covered with a two-millimeters thick silver sulfadiazine dressing (pad) while the other was coated with silver by a silver nano spray (two puffs on a 2cm*2cm burn injury). Next, the two halves were covered by Vaseline gauze dressings. The burn dressings were changed every day by the present researcher. Moreover, the researcher took photos of the burns every day. On the first, third, seventh, fourteenth, and twenty first days after the patients arrival at the hospitals, however, their burns were ranked and a score was given to them using Bates and Johnson instrument. The same procedure and materials were used every day to change the burn dressings. The patients were insisted to come to the hospital after leaving to have the dressings of their burns changed. In case, any allergies was diagnosed, a specialist was called in to treat it. Finally, on the twenty first day, the burn injuries were examined by the specialist and a final score was given to each burn. A blind study as a physician based on photos taken from the ulcer using the tool Bates - Jensen to

score and the type of wound healing does not know.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017010331752N1**

Registration date: **2017-03-01, 1395/12/11**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-03-01, 1395/12/11

Registrant information

Name

Azita Dolatabadi

Name of organization / entity

Sabzevar University of Medical Sciences

Country

Iran (Islamic Republic of)

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+98 51 4423 8850

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Recruitment status

Recruitment complete

Funding source

Governmental

Expected recruitment start date

2016-12-30, 1395/10/10

Expected recruitment end date

2017-07-01, 1396/04/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Compare the effect of silver nano spray and silver sulfadiazine 1% on wound healing in burns.

Public title

The effect of burn cream silver sulfadiazine and silver nano spray burns

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: burns from heat source or liquid; Visit of the burn until less than 24 hours previously; Patients aged between 18 -60 years; The absence of diabetes, cardiovascular disease, skin sensitivity; The absence of any type of immunodeficiency disease. Exclusion criteria: Not wanting to work for any reason; transfer or death of the patient; drug allergy symptoms, according to the doctor.

Age

From **18 years** old to **60 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **42**

Randomization (investigator's opinion)

Randomized

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

Single blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

25/5000 Sabzevar University of Medical Sciences

Street address

22/5000 Sabzevar road Tohid

City

sabzevar

Postal code**Approval date**

2016-02-12, 1394/11/23

Ethics committee reference number

با کد اخلاق (IR.MEDSAB.REC.1394.93)

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

burn

ICD-10 code

T30.2

ICD-10 code description

Burn of second degree, body region unspecified

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

Wound size

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

2**Description**

Deep wounds

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

3**Description**

Wound edge

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

4**Description**

Loss

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

5**Description**

Necrotic tissue

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

6

Description

The amount of necrotic tissue

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

7

Description

Exudate

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

8

Description

12/5000 The amount of exudate

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

9

Description

The color of the skin around the wound

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

10

Description

18/5000 Tissue edema around the wound

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

11

Description

endorasion

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

12

Description

Granulation

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

13

Description

Epithelialization

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

14

Description

Total score of wounds

Timepoint

1-3-7-14-21

Method of measurement

Tools Bates - Jensen

Secondary outcomes

empty

Intervention groups

1

Description

wound has been divided into two equal parts and one part silver sulfadiazine to a thickness of 2 mm and the other with silvernano spray at 2 puff covered and then dresse

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Hospital vasei sabzevar

Full name of responsible person

Researcher

Street address

Sabzevar University of Medical Sciences

City

sabzevar

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Sabzevar University of Medical Sciences

Full name of responsible person

Dolatabadi Azita

Street address

Sabzevar University of Medical Sciences

City

Sabzevar

Grant name

Grant code / Reference number
Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source
Sabzevar 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
Sabzevar University of Medical Sciences

Full name of responsible person
Dr. Vaheb Mojtaba

Position
Plastic surgery

Other areas of specialty/work

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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