

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 May 2026

Evaluation of the effects of graft pretreatment with Deferoxamine on the outcome of nonunion scaphoid fracture

Protocol summary

Summary

Objectives: Scaphoid fractures present unique therapeutic challenges due to the particular geometry of the fractures and the tenuous vascular pattern of the scaphoid, giving rise to a nonunion fracture in a considerable number of patients. Optimization of the existing methods, such as using nonvascularized bone grafting, might improve the outcome of these treatments. This study aims to evaluate the effects of graft pretreatment with Deferoxamine on the outcome of nonunion scaphoid fracture surgery. Design: Clinical trial Setting and conduct: A total of 20 patients will be divided into 2 groups, 10 patients each. Inclusion criteria: Age of 18 to 60 years; No Comorbid disorders that might increase the risk of surgery; No hematologic disorders and any disease with platelet Dysfunction; Patients not receiving drugs which affect bone restoration such as corticosteroids; Fractures showing no improvement at least 3 months after occurrence; Exclusion criteria: New trauma leading to fixation disturbance; Severe infection untreatable with antibiotics; Incidence of diseases needing corticosteroids or chemotherapy. Intervention: In group A, autologous cancellous allograft was pretreated with Deferoxamine (500 mg) right before implanting the graft into the position. In group B, autologous cancellous allograft was implanted into the position without pretreatment with Defroxamine. Main outcome measures: Clinical evaluation (range of motion) and radiologic evaluation of union.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017091035382N5**

Registration date: **2017-09-19, 1396/06/28**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2017-09-19, 1396/06/28

Registrant information

Name

Farid Najd Mazhar

Name of organization / entity

Shafa orthopedic hospital, Iran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

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Email address

najdmazhar.f@iums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor of research for Iran University of Medical Sciences

Expected recruitment start date

2017-11-01, 1396/08/10

Expected recruitment end date

2018-11-01, 1397/08/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of the effects of graft pretreatment with Deferoxamine on the outcome of nonunion scaphoid fracture

Public title

Pretreatment of graft with Deferoxamine and its effect on

the outcome of nonunion scaphoid fracture

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Age of 18 to 60 years; No hematologic disorders and any disease with platelet Dysfunction; No Comorbid disorders that might increase the risk of surgery; Patients not receiving drugs which affect bone restoration such as corticosteroids; Fractures showing no improvement at least 3 months after occurrence.

Exclusion criteria: New trauma leading to fixation disturbance; Severe infection untreatable with antibiotics; Incidence of diseases needing corticosteroids or chemotherapy.

Age

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

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Iran University of Medical Sciences

Street address

Hammat Highway, next to Milad tower

City

Tehran

Postal code

Approval date

2010-08-20, 1389/05/29

Ethics committee reference number

-

Health conditions studied

1

Description of health condition studied

Nonunion scaphoid fracture

ICD-10 code

M84.1

ICD-10 code description

pseudarthrosis after fusion or arthrodesis

Primary outcomes

1

Description

Wrist range of motion

Timepoint

3 months after the surgery

Method of measurement

Goniometer

2

Description

Radiologic outcome

Timepoint

3 months after the surgery

Method of measurement

X-ray and MRI

Secondary outcomes

empty

Intervention groups

1

Description

Group A: pretreatment of graft with Defroxamine, right before implanting the graft into the position

Category

Treatment - Surgery

2

Description

Group B: Implanting the graft into the position without its pretreatment with deforxamine.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Shafa Orthopedic Hospital

Full name of responsible person

Farid Najd Mazhar

Street address

Shafa Orthopedic Hospital, Mojahedin Islam Avenue,

Shohada Square
City
Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for research of Iran University of
Medical Sciences

Full name of responsible person

Morteza Naserbakht

Street address

Iran University of Medical Sciences, Shahi Hemmat
Highway,

City

Tehran

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 Iran 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

Shafa Orthopedic Hospital

Full name of responsible person

Farid Najd Mazhar

Position

Orthopedic surgeon

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

