

Clinical Trial Protocol

Iranian Registry of Clinical Trials

18 Jul 2026

Evaluation of local Deferoxamine impact on revascularization and improvement of avascular necrosis of the lunate bone (Kienbock's disease)

Protocol summary

Summary

Objectives: Kienbock's disease, is a rare, debilitating condition that can lead to chronic pain and dysfunction. It is caused by lack of blood supply for lunate bone. Desferoxamine is a drug with positive effects on angiogenesis and bone repair. Here we aim to evaluate the Deferoxamine effect on the vascularization of lunate bone in Kienbock's disease. Design: Clinical trial. Setting and conduct: A total of 10 Patients, referred to shafa orthopedic hospital, diagnosed with Kienbock's disease, will be assigned into intervention group. Inclusion and exclusion criteria: Inclusion criteria: Radiologic Diagnosis of the Kienbock's disease by 3 hand surgeons; Age of 18 to 60 years. Lack of hematologic disorders and any disease with platelet Dysfunction; Lack of any comorbid disorders that might increase the risk of surgery including uncontrolled diabetes, cardiovascular disorders, rheumatic diseases such as rheumatoid arthritis, cancers, hepatic and renal failure and etc; Consumption of no drug which affect bone restoration such as corticosteroids. Exclusion Criteria: New severe trauma affecting the fracture dislocation and fixation status, Incidence of severe infection which can not be controlled with antibiotics and needs surgery; Incidence of disorders needing specific drugs such as corticosteroids and chemotherapy which affect the bone repair. Intervention: Local Deferoxamine (500 mg) will be infused at days 0 and 14 along with the implication of external fixator. Main outcome measures: The outcome will be assessed using clinical (range of motion) and paraclinical (X-ray and MRI) measures.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017073035382N1**

Registration date: **2017-08-11, 1396/05/20**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2017-08-11, 1396/05/20

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

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Recruitment status

Recruitment complete

Funding source

Vice chancellor of research, Iran University of Medical Sciences

Expected recruitment start date

2017-12-20, 1396/09/29

Expected recruitment end date

2018-04-18, 1397/01/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of local Deferoxamine impact on revascularization and improvement of avascular necrosis of the lunate bone (Kienbock's disease)		Postal code	
		Approval date	2010-09-23, 1389/07/01
		Ethics committee reference number	-
Public title	implication of Deferoxamine in the treatment of kienbock's disease	Health conditions studied	
Purpose	Treatment	1	
Inclusion/Exclusion criteria	Inclusion criteria: Radiologic Diagnosis of the Kienbock's disease by 3 hand surgeons; Age of 18 to 60 years. Lack of hematologic disorders and any disease with platelet Dysfunction; Lack of any comorbid disorders that might increase the risk of surgery including uncontrolled diabetes, cardiovascular disorders, rheumatic diseases such as rheumatoid arthritis, cancers, hepatic and renal failure and etc; Consumption of no drug which affect bone restoration such as corticosteroids. Exclusion Criteria: New severe trauma affecting the fracture dislocation and fixation status, Incidence of severe infection which can not be controlled with antibiotics and needs surgery; Incidence of disorders needing specific drugs such as corticosteroids and chemotherapy which affect the bone repair.	Description of health condition studied	Kienböck disease of adults
		ICD-10 code	M93.1
		ICD-10 code description	Adult osteochondrosis of carpal lunate
		Primary outcomes	
		1	
		Description	Clinical and radiologic symptoms
		Timepoint	Months 3, 6 and 12 of intervention
		Method of measurement	Range of Motion, Xray and MRI
Age	From 35 years old to 70 years old	Secondary outcomes	empty
Gender	Both	Intervention groups	
Phase	3	1	
Groups that have been masked	No information	Description	Deferoxamine, 500mg, two sessions, once at the start of the study and once two weeks later.
Sample size	Target sample size: 10	Category	Treatment - Drugs
Randomization (investigator's opinion)	Randomized	Recruitment centers	
Randomization description		1	
Blinding (investigator's opinion)	Double blinded	Recruitment center	
Blinding description		Name of recruitment center	Shafa Orthopedic Hospital
Placebo	Used	Full name of responsible person	Farid Najd Mazhar
Assignment	Single	Street address	Mojahedin Islam Avenue, Shohada square.
Other design features		City	Tehran
Secondary Ids	empty	Sponsors / Funding sources	
Ethics committees		1	
1		Sponsor	
Ethics committee			
Name of ethics committee	Iran University of Medical Sciences		
Street address	Next to Milad Tower, Hemmat highway		
City	Tehran		

Name of organization / entity

Vice Chancellor for research of Iran University of Medical Sciences

Full name of responsible person

Morteza Naserbakht

Street address

Next to Milad tower, 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, Faculty Member

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Web page address**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