

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Cardioeffects of deferoxamine in acute and delayed anthracyclins cardiotoxicities

Protocol summary

Summary

1- Objectives, to evaluate the efficacy of Deferoxamine in prevention of acute and delayed doxorubicin-induced cardio toxicity. 2- Design, the study is designed as a phase 3, open label, single center, and two arms clinical trial study. Sixty patients who eligible for inclusion criteria will be enrolled in the study. They will be divided into three groups with block randomization. 3- Setting and conduct, all stages of the project explain for each patient, and then if they want to enter the project inform consent would be obtained. The patients will be treated by different doses of Deferoxamine during chemotherapy. 4- Participants including major eligibility criteria, new pediatric cancer patients who are going to receive Anthracyclin drugs as part of their chemotherapy regimen. 5- Intervention, 10 to 20 mg/kg/day and 50 mg/kg/day dose regimen of Deferoxamine in two intervention groups, respectively. One group as control will receive no treatment. 6- Main outcome measures (variables), include assessing Troponin I, NT-proBNP, cardiac function with conventional and tissue doppler echocardiography.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016080615666N5**

Registration date: **2016-09-06, 1395/06/16**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2016-09-06, 1395/06/16

Registrant information

Name

Mohammad Reza Bordbar

Name of organization / entity

Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 71 3647 3239

Email address

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Shiraz University of Medical Sciences

Expected recruitment start date

2015-12-01, 1394/09/10

Expected recruitment end date

2016-11-30, 1395/09/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Cardioeffects of deferoxamine in acute and delayed anthracyclins cardiotoxicities

Public title

deferoxamine and its cardiotoxicity effects

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: signing informed consent; male or female aged between 2 to 18 years at screening; new pediatric cancer patients who are going to receive Anthracyclin drugs as part of their chemotherapy regimen Exclusion criteria: patients below two years old; patients with previous history of treatment with any kind

of chemotherapy or radiotherapy; diagnosis of congenital heart disease, preexisting heart failure and established renal disease

Age

From **2 years** old to **18 years** old

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

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

Not 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 Shiraz University of Medical Sciences

Street address

7th floor, Vice chancellery for research affairs, Shiraz University of Medical Sciences, Zand avenue, Shiaz, Iran

City

Shiraz

Postal code**Approval date**

2016-03-12, 1394/12/22

Ethics committee reference number

ir.sums.med.rec.1394.83

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

acute and chronic cardiopathy

ICD-10 code

I51.9

ICD-10 code description

Heart disease, unspecified

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

cardiac Troponin-I

Timepoint

baseline, after the first dose of doxorubicin and after chemotherapy course

Method of measurement

hematology analysis

2**Description**

NT-proBNP

Timepoint

baseline, after the first dose of doxorubicin and after chemotherapy course

Method of measurement

hematology analysis

3**Description**

cardiac indexes

Timepoint

baseline, 3 and 12 months intervals

Method of measurement

Conventional and tissue doppler echocardiography

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group 1: Deferoxamine 10 to 20 mg/kg. Frequency and route of administration is once per day continuous IV infusion over 8 hours.

Category

Treatment - Drugs

2**Description**

Intervention group 2: Deferoxamine 50 mg/kg. Frequency and route of administration is once per day continuous IV infusion over 8 hours.

Category

Treatment - Drugs

3**Description**

Control group: no treatment

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Nemazee hospital, Shiaz University of Medical Sciences, Shiraz, Iran

Full name of responsible person

Dr. Mohammad Reza Bordbar

Street address**City**

Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor of research, Shiaz Univeisity of Medical Sciences

Full name of responsible person

Dr. Seyed Basir Hashemi

Street address

7th floor, Shiraz University of Medical Sciences, Zand avenue, Shiraz, Iran

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Shiraz

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

Yes

Title of funding source

Vice chancellor of research, Shiaz Univeisity 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

Shiraz University of Medical Sciences

Full name of responsible person

Mohammad Reza Bordbar

Position

Pediatric hematologist

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Person responsible for updating data

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Name of organization / entity

medical school

Full name of responsible person

Fatemeh Amirmoezi

Position

general physician

Other areas of specialty/work**Street address**

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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