Clinical Trial Protocol
Iranian Registry of Clinical Trials

01 Jun 2026

Evaluation the effect of co-enzyme Q10 supplementation on inhibition of ferroptosis in patients with thalassemia major referred to Shahrekord Hajer Hospital

Protocol summary

Study aim

Determining the effect of coenzyme Q10 on inhibiting ferroptosis in patients with thalassemia major

Design

The present semi-experimental study is a before and after clinical trial without control group done on 50 patients with thalassemia major. In addition to the standard treatment, the patients also receive a 100 mg Q10 tablet daily for eight weeks. Before the study, the parameters of ferroptosis including superoxide dismutase (SOD), catalase, glutathione peroxidase, ferritin, hemoglobin, ESR and CRP will be evaluated, and after eight weeks of intervention, the parameters will be evaluated again.

Settings and conduct

50 patients are selected from the thalassemia patients referred to Hajer Shahrekord Hospital in 1402. These patients are selected in a similar way (patients who are similar in terms of blood collection intervals). this study is a before and after clinical trial without control group. The relevant laboratory parameters including superoxide dismutase (SOD), catalase, glutathione peroxidase, ferritin, hemoglobin, ESR and CRP will be measured for these patients before start intervention (baseline), and then, after eight weeks of taking one 100 mg Q10 tablet daily, in addition to the standard treatment, Patients will also receive the supplement

Participants/Inclusion and exclusion criteria

Inclusion criteria: patient with thalassemia major Exit criteria: Patient non-cooperation The presence of side effects People who suffer from infection and inflammation. death of the patient

Intervention groups

The study will be a single group comparison before and after. The intervention group receives standard treatment + 100 mg Q10 tablets

Main outcome variables

The level of ferritin, superoxide dismutase, glutathione peroxidase-4 GPX4, catalase, hemoglobin, ESR, CRP

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20221211056777N1**
Registration date: **2023-01-22, 1401/11/02**
Registration timing: **prospective**

Last update: **2023-01-22, 1401/11/02**
Update count: **0**

Registration date

2023-01-22, 1401/11/02

Registrant information

Name

Shima Rahmati

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 38 3224 5131

Email address

rahmati.sh@skums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-03-02, 1401/12/11

Expected recruitment end date

2023-08-27, 1402/06/05

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation the effect of co-enzyme Q10 supplementation on inhibition of ferroptosis in patients with thalassemia major referred to Shahrekord Hajer Hospital

Public title

Evaluation the effect of co-enzyme Q10 in patients with thalassemia major

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

patient with thalassemia major

Exclusion criteria:

Non-cooperation of the patient The presence of side effects People who suffer from infection and inflammation. Death of the patient

Age

No age limit

Gender

Both

Phase

1

Groups that have been masked

- Data analyser

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

The data analyst does not know whether the collected data are related to before or after the intervention

Placebo

Not used

Assignment

Single

Other design features

*

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Shahrekord University of Medical Sciences

Street address

Kashani street

City

Shahrekord

Province

Chahar-Mahal-va-Bakhtiari

Postal code

8813833435

Approval date

2022-10-04, 1401/07/12

Ethics committee reference number

IR.SKUMS.REC.1401.116

Health conditions studied

1

Description of health condition studied

thalassemia major

ICD-10 code

D56.1

ICD-10 code description

Beta thalassemia

Primary outcomes

1

Description

The level of superoxide dismutase, catalase and peroxidase enzymes and ferritin serum level. ESR, CRP

Timepoint

Before the intervention and eight weeks after the intervention

Method of measurement

ELISA test kit

Secondary outcomes

empty

Intervention groups

1

Description

50 patients with thalassemia major are selected. The laboratory parameters (superoxide dismutase (SOD), catalase and glutathione peroxidase, ferritin, hemoglobin, ESR and CRP) will be checked by ELISA method for these patients before start intervention (baseline), and then, after eight weeks of taking one 100 mg Q10 tablet (Golden Life Company) daily.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Shahrekord Hajar hospital

Full name of responsible person

Shima Rahmati
Street address
Parastar street
City
Shahrekord
Province
Chahar-Mahal-va-Bakhtiari
Postal code
8816754633
Phone
+98 913 985 4865
Email
shimarahmati1987@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Shahre-kord University of Medical Sciences
Full name of responsible person
Elham Reisi
Street address
Kashani Street
City
Shahrekord
Province
Chahar-Mahal-va-Bakhtiari
Postal code
8813833435
Phone
+98 38 3334 9507
Email
shimarahmati1987@gmail.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Shahre-kord University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Public
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Shahre-kord University of Medical Sciences
Full name of responsible person
Shima Rahmati
Position
Researcher. Cancer Research Center
Latest degree
Ph.D.
Other areas of specialty/work
Medical Biotechnology
Street address
Parastar
City
Shahrekord
Province
Chahar-Mahal-va-Bakhtiari
Postal code
8816754633
Phone
+98 38 3222 0016
Email
shimarahmati1987@gmail.com

Person responsible for scientific inquiries

Contact
Name of organization / entity
Shahre-kord University of Medical Sciences
Full name of responsible person
Kiavash Fekri
Position
Associate professor
Latest degree
Subspecialist
Other areas of specialty/work
Hematology
Street address
Parastar
City
Shahrekor
Province
Chahar-Mahal-va-Bakhtiari
Postal code
8816754633
Phone
0383222116
Email
k.fekri@muk.ac.ir

Person responsible for updating data

Contact
Name of organization / entity
Shahre-kord University of Medical Sciences
Full name of responsible person
Shima Rahmati
Position
Research Assistant in Cancer Research Center
Latest degree
Ph.D.
Other areas of specialty/work
Medical Biotechnology
Street address
Parastar
City
Shahrekord

Province
Chahar-Mahal-va-Bakhtiari
Postal code
8816754633
Phone
+98 38 3222 1166
Email
shimarahmati1987@gmail.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available
Study Protocol
Yes - There is a plan to make this available
Statistical Analysis Plan
Yes - There is a plan to make this available
Informed Consent Form
Yes - There is a plan to make this available
Clinical Study Report
Yes - There is a plan to make this available
Analytic Code
Yes - There is a plan to make this available
Data Dictionary
Yes - There is a plan to make this available
Title and more details about the data/document
To share the data and documents of this research, only the information related to the main outcome will be shared. Also, files that can be published and do not violate people's privacy will be published.
When the data will become available and for how long
The access period will start 6 months after the results are published.
To whom data/document is available
Our data will only be available to researchers working in academic and scientific institutions
Under which criteria data/document could be used
If there are conditions, all our data will be shared except personal information of people. The use of our data will only be allowed for similar research and review of our data by other researchers. All those who work in universities and scientific centers and decide to conduct similar research or check the accuracy of our data can access our data.
From where data/document is obtainable
In order to receive information, all eligible people can collect data by referring to the person in charge of the project. The contact methods are the email address shimarahmati1987@gmail.com or the contact number 00989139854865
What processes are involved for a request to access data/document
To receive information after sending the request, the requests will be reviewed within 10 days. If the above conditions are met, the information will be sent to the provided email within 30 days at most.
Comments