Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Effect of Coenzyme Q10 on serum levels of inflammatory markers, liver enzymes, leptin and adiponectin in patients with non alcoholic fatty liver disease

Protocol summary

Summary

The purpose of this study was to investigate the effect of Coenzyme Q10 on serum levels of inflammatory markers, liver enzymes, leptin, adiponectin in patients with non alcoholic fatty liver disease. This Controlled, double-blind, randomized clinical trial was performed on 40 patients. Patients were randomly divided into 2 groups: The case and control group received CoQ10 supplement (100 mg per day) and starch (100 mg per day) as placebo respectively, for 3 months. Variables including anthropometric indicators, blood pressure, inflammatory markers, liver enzymes, fasting blood sugar and lipid profile were measured before and after of intervention.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013071313984N1**
Registration date: **2013-12-18, 1392/09/27**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2013-12-18, 1392/09/27

Registrant information

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Farnaz Farsi
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School of Paramedicine, Ahvaz Jondishapur University Of Medical Sciences
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Iran (Islamic Republic of)
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+98 61 1416 2364
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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research,Ahvaz jundishapur University of Medical Sciences

Expected recruitment start date

2012-05-15, 1391/02/26

Expected recruitment end date

2013-01-12, 1391/10/23

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Coenzyme Q10 on serum levels of inflammatory markers, liver enzymes, leptin and adiponectin in patients with non alcoholic fatty liver disease

Public title

Non alcoholic fatty liver disease and Coenzyme Q10

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: 19-59 years old patient with non alcoholic fatty liver disease Exclusion criteria: Patients who have diabetes, cardiovascular, kidney and other hepatic diseases; Pregnant or lactating women; Smoking; Alcohol consumption; Use of dietary supplements.

Age

From **19 years** old to **59 years** old

Gender

Both

Phase
2
Groups that have been masked
No information
Sample size
Target sample size: **40**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee of Ahvaz Jundishapur University of Medical Sciences
Street address
Jondishapur University Of Medical Sciences, Golestan Ave. Ahvaz
City
Ahvaz
Postal code
6165777696
Approval date
2012-04-29, 1391/02/10
Ethics committee reference number
ETH-493

Health conditions studied

1

Description of health condition studied
Non Alcoholic Fatty liver Disease
ICD-10 code
K76.0
ICD-10 code description
Fatty (change of) liver, not elsewhere classified

Primary outcomes

1

Description
Aspartate aminotransferase
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Photometric

2

Description
Alanine aminotransferase
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Photometric

3

Description
Interlukine-6
Timepoint
Before intervention and 3 months after intervention
Method of measurement
ELISA

4

Description
hs-CRP
Timepoint
Before intervention and 3 months after intervention
Method of measurement
ELISA

5

Description
Gamma-glutamyl transpeptidase
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Photometric

6

Description
TNF-α
Timepoint
Before intervention and 3 months after intervention
Method of measurement
ELISA

7

Description
Adiponectin
Timepoint
Before intervention and 3 months after intervention
Method of measurement
ELISA

8

Description
Leptin
Timepoint
Before intervention and 3 months after intervention
Method of measurement
ELISA

9

Description
Fasting blood sugar
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Photometric

10

Description
LDL-C
Timepoint
Before intervention and 3 months after intervention
Method of measurement
undirected method with Friedewald

11

Description
Total cholestrol
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Photometric

12

Description
HDL-C
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Enzymatic

13

Description
Triglyciride
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Photometric

14

Description
VLDL
Timepoint
Before intervention and 3 months after intervention
Method of measurement
TG/5

Secondary outcomes

1

Description
Hip circumference
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Meter

2

Description
Waist circumference
Timepoint
Before intervention, 3 month after intervention
Method of measurement
Meter

3

Description
Blood pressure
Timepoint
Before intervention and 3 month after intervention
Method of measurement
Blood Pressure Monitor

4

Description
Body mass index
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Body weight in kilograms divided by height squared in meters

5

Description
Body weight
Timepoint
Before intervention and 3 months after intervention
Method of measurement
Digital scale

Intervention groups

1

Description
Intervention group: daily consumption of 100 milligram coenzyme Q10 supplement for 3 months
Category
Treatment - Drugs

2

Description
Control group: daily consumption of 100 milligram starch for 3 months
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center

Gastroenterology Clinic of Imam Khomeini Hospital

Full name of responsible person
Farnaz Farsi

Street address
Ahvaz, Azadegan alley

City
Ahvaz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice chancellor for research, Ahvaz Jondishapur University Of Medical Sciences

Full name of responsible person
Majid Karandish

Street address
Ahvaz Jondishapur University Of Medical Sciences, Golestan Ave. Ahvaz

City
Ahvaz

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, Ahvaz Jondishapur 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

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School of Paramedicine, Ahvaz Jondishapur University Of Medical Sciences

Full name of responsible person
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Position
Ms. in Nutrition sciences

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