Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Effects of Quercetin on plasma total antioxidant capacity, lipid peroxidation, blood pressure, inflammatory markers and disease activity in patients with Rheumatoid Arthritis

Protocol summary

Summary

The present study is a double-blind, placebo-controlled, randomized trial to investigate the effect of Quercetin on plasma total antioxidant capacity, Malondialdehyde and oxidized- LDL, blood pressure, inflammatory factors and disease activity in patients with Rheumatoid Arthritis. Fifty Rheumatoid Arthritis patients will be recruited and randomly assigned to receive either Quercetin, 500 mg in the form of capsules, or placebo for 8 weeks. Plasma level of MDA, ox-LDL, systolic & diastolic pressure, TAC, hs-CRP, hs-TNFα, disease activity score, physician global assessment, morning stiffness, ESR, RF, assessment of pain by VAS and in order to controlling the confounding factors, weight, height, BMI, 24-h dietary recall, disease duration and severity, drugs type and dosage, physical activity will be measured at the baseline and the end of the study.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138807252394N2**
Registration date: **2010-03-13, 1388/12/22**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2010-03-13, 1388/12/22

Registrant information

Name

Shima Jazayeri

Name of organization / entity

Iran University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor of Research, Iran University of Medical Sciences

Expected recruitment start date

2010-04-21, 1389/02/01

Expected recruitment end date

2011-04-21, 1390/02/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of Quercetin on plasma total antioxidant capacity, lipid peroxidation, blood pressure, inflammatory markers and disease activity in patients with Rheumatoid Arthritis

Public title

Effects of Quercetin on plasma total antioxidant capacity, lipid peroxidation, blood pressure, inflammatory markers and disease activity in patients with Rheumatoid Arthritis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Willing to participate in study, Clinical diagnosis of AR (meeting the American college of rheumatology 1987 criteria), Ages between 19 – 70 years , No smoking or addiction , No drug type and dose fluctuation since 1 month prior to the study and during

intervention period , Not having severe cardiovascular, hepatic, kidney, gastrointestinal, thyroid, parathyroid diseases, diabetes and inflammation, Not using medications except for AR conventional drugs, Not using antioxidant supplements during last month, No pregnancy or lactation Exclusion criteria: Compliance less than 70%, Disinclination to continue for cooperation, developing illnesses which need particular cures or interfere with intervention such as increasing the disease activity or trauma

Age
From **19 years** old to **70 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **50**

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 school of health, Iran university of medical sciences

Street address
school of Health, Arjantin Square, Alvand Ave., Tehran

City
Tehran

Postal code
1516846514

Approval date
empty

Ethics committee reference number
3248

Health conditions studied

1

Description of health condition studied
Rheumatoid Arthritis

ICD-10 code
M05

ICD-10 code description
Seropositive rheumatoid arthritis

2

Description of health condition studied
Rheumatoid arthritis

ICD-10 code
M06

ICD-10 code description
Other rheumatoid arthritis

Primary outcomes

1

Description
total antioxidant capacity (TAC)

Timepoint
8 weeks

Method of measurement
colorimetric assay

2

Description
hs-TNF-alpha

Timepoint
8 weeks

Method of measurement
ELISA

3

Description
hs- CRP

Timepoint
8 weeks

Method of measurement
ELISA

4

Description
ox-LDL

Timepoint
8 weeks

Method of measurement
ELISA

5

Description
Malondialdehyde

Timepoint
8 weeks

Method of measurement
chemical colorimetric

6

Description
disease activity score- 28 joints(DAS-28)
Timepoint
8 weeks
Method of measurement
Physical examination

7

Description
morning stiffness
Timepoint
8 weeks
Method of measurement
question

8

Description
blood pressure
Timepoint
8 weeks
Method of measurement
sphyngomanometer

Secondary outcomes

1

Description
rheumatoid factor(RF)
Timepoint
8 weeks
Method of measurement
turbidometric assay

2

Description
eritrocyte sedimentation rate(ESR)
Timepoint
8 weeks
Method of measurement

Intervention groups

1

Description
Quercetin supplement, 500 mg caps per day for 8 weeks
Category
Treatment - Drugs

2

Description
placebo caps for 8 weeks
Category
empty

Recruitment centers

1

Recruitment center
Name of recruitment center
rheumatology clinic of Firuzgar hospital
Full name of responsible person
Dr. Mojdeh Zabihi
Street address
City
Tehran

2

Recruitment center
Name of recruitment center
rheumatology clinic of Loghman hospital
Full name of responsible person
Dr. Arman Ahmadzadeh
Street address
City
Tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Iran Univesity of Medical Sciences
Full name of responsible person
Dr Mohsen Asadi Lari
Street address
Iran University of Medical Sciences, Hematt express way, Tehran ,Iran
City
Tehran
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Iran Univesity 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

Person responsible for scientific inquiries

Contact

Name of organization / entity
School of Health, Iran University of Medical Sciences

Full name of responsible person
Dr. Shima Jazayeri

Position
Assistant Professor

Other areas of specialty/work

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Person responsible for updating data

Contact

Name of organization / entity
School of Health, Iran University of Medical Sciences

Full name of responsible person
Dr. Shima Jazayeri

Position
Assistant Professor

Other areas of specialty/work

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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