Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Effect of Oral Glucosamine on blood glucose and insulin level in patients with osteoarthritis during glucose tolerance test

Protocol summary

Summary

Osteoarthritis is the commonest chronic disease affected the joints in aging. Short intravenous consumption of glucosamine dose not effective on insulin sensitivity. The aim of present study is to evaluate glucosamine effect on blood sugar, insulin and insulin resistance of osteoarthritis patients and comparison of these factors in placebo group. The voluntary osteoarthritis non diabetic patients who randomly divided into two control and intervention groups with 20 cases are received 1500 mg glucosamine capsules daily till three months and placebo capsules. Fast blood glucose, glucose tolerance test and insulin level are measured from the baseline and after 3 months intervention. Results are analyzed as the changes in fast blood glucose, glucose tolerance test, insulin level and insulin resistance level in both intervention and control group.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201304284167N5**
Registration date: **2014-05-08, 1393/02/18**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2014-05-08, 1393/02/18

Registrant information

Name

Shokoufeh Bonakdaran

Name of organization / entity

Endocrine Research Center

Country

Iran (Islamic Republic of)

Phone

+98 51 1801 2976

Email address

bonakdaransh@mums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Mashhad University of Medical Sciences

Expected recruitment start date

2012-05-21, 1391/03/01

Expected recruitment end date

2014-05-22, 1393/03/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Oral Glucosamine on blood glucose and insulin level in patients with osteoarthritis during glucose tolerance test

Public title

Effect of Oral Glucosamine on glucose and insulin levels in patients with osteoarthritis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Osteoarthritis non diabetic patients with American College Of Rheumatology criteria for diagnosis of osteoarthritis of hand, knee and or hip; patients who complete the consent form and participate to study consciously. Exclusion criteria: Having body mass index lower than 20 and or higher than 30, history of diabetes or fast blood sugar upper than 110; history of liver or renal disease, myocardial infarction, uncontrolled inflammatory diseases, malignancy and endocrine

disorder which interfere glucose metabolism; consumption of corticosteroids and other effective medicine on blood glucose; anemia; pregnancy or lactation

Age
No age limit

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 Mashhad University of Medical Sciences

Street address
Central Building of Mashhad University of Medical Sciences (Ghorshi), Daneshgah 16, Daneshgah Street

City
Mashhad

Postal code

Approval date
2008-09-22, 1387/07/01

Ethics committee reference number
87920

Health conditions studied

1

Description of health condition studied
Knee Osteoarthritis

ICD-10 code
M15.9

ICD-10 code description
Polyarthrosis, unspecified

Primary outcomes

1

Description
Fasting blood glucose

Timepoint
Baseline and after 3 months intervention

Method of measurement
Glucose oxidase Method

2

Description
Glucose tolerance test

Timepoint
Baseline and after 3 months intervention

Method of measurement
Glucose oxidase Method

3

Description
Fasting insulin serum

Timepoint
Baseline and after 3 months intervention

Method of measurement
Immunoradiometric assay

Secondary outcomes

1

Description
Insulin Resistance

Timepoint
Baseline and after 3 months intervention

Method of measurement
HOMA-IR index

2

Description
Fasting insulin serum

Timepoint
Baseline and after 3 months intervention

Method of measurement
Immunoradiometric assay

3

Description
Fasting blood glucose

Timepoint
Baseline and after 3 months intervention

Method of measurement
Glucose oxidase Method

4

Description
Glucose tolerance test

Timepoint

Baseline and after 3 months intervention

Method of measurement

Glucose oxidase Method

Intervention groups

1

Description

Intervention group: Glucosamine 1500 mg daily until three months

Category

Treatment - Drugs

2

Description

Control group: One placebo tablet daily till 3 months

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Ghaem Hospital, Mashhad University of Medical Sciences

Full name of responsible person

Street address

City

Mashhad

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Mashhad University of Medical Sciences

Full name of responsible person

Dr Mohsen Tafaghodi

Street address

Central Building of Mashhad University of Medical Sciences (Ghorshi), Daneshgah 16, Daneshgah Street

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Mashhad

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Mashhad 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

Mashhad University of Medical Sciences

Full name of responsible person

Shokoufeh Bonakdaran

Position

Associate Professor

Other areas of specialty/work

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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

Dr Shokoufeh Bonakdaran

Position

Other areas of specialty/work

Street address

City

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Phone
Fax
Email
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