Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Assessment of oral Vitamin D prescription on Eyelid Meibomian Gland Dysfunction treatment, A clinical trial

Protocol summary

Study aim

1- Assessment of serum hydroxy-vitamin D3 levels in patients with Meibomian gland dysfunction 2- Investigation of the relationship between the severity of Meibomian gland dysfunction and serum vitamin D3 levels 3- Evaluation of changes in the severity of Meibomian gland dysfunction following an eight-week course of oral vitamin D treatment

Design

The study population consists of patients with Meibomian gland dysfunction attending an ophthalmology clinic. The study proceeds in two stages: first, serum Vitamin D3 levels are assessed; second, 18 patients with serum Vitamin D3 levels below 30 ng/mL will receive weekly oral Vitamin D supplementation, and changes in their MGD status will be evaluated after eight weeks. In this second stage, a control group of individuals with similar serum Vitamin D3 levels will receive a placebo.

Settings and conduct

The study population consists of patients with Meibomian gland dysfunction attending an ophthalmology clinic of Tabriz Nikookari Hospital.The study proceeds in two stages: first, serum Vitamin D3 levels are assessed; second, 18 patients with serum Vitamin D3 levels below 30 ng/mL will receive weekly oral Vitamin D supplementation, and changes in their MGD status will be evaluated after eight weeks. In this second stage, a control group of individuals with similar serum Vitamin D3 levels will receive a placebo.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Individuals with Meibomian gland dysfunction. Exclusion criteria: Age under 18; presence of concurrent systemic diseases (such as rheumatological or renal disorders); history of eyelid surgery or ocular surface disease; history of Vitamin D intake within the past three months; and pregnancy.

Intervention groups

Individuals suffering from Meibomian gland dysfunction

Main outcome variables

Changes in the severity of eyelid Meibomian gland dysfunction following oral Vitamin D

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20100530004051N1**
Registration date: **2026-10-09, 1405/07/17**
Registration timing: **prospective**

Last update: **2026-10-09, 1405/07/17**
Update count: **0**

Registration date

2026-10-09, 1405/07/17

Registrant information

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Rana Sorkhabi
Name of organization / entity
Tabriz university of medical sciences
Country
Iran (Islamic Republic of)
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Recruitment status

recruiting

Funding source

Expected recruitment start date

2026-11-01, 1405/08/10

Expected recruitment end date

2027-04-04, 1406/01/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Assessment of oral Vitamin D prescription on Eyelid Meibomian Gland Dysfunction treatment, A clinical trial

Public title

Vitamin D and Eyelid Meibomian Gland Dysfunction

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

patients with Meibomian gland dysfunction

Exclusion criteria:

Under 18 years of age Menopausal women History of ocular surface surgery History of rheumatologic disease History of Vitamin D or multivitamin intake in the last three months

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **100**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committee Working Group, Tabriz University of Medical Sciences

Street address

Tabriz University of Medical Sciences Central Building, Golgasht Ave, Azadi Street, Tabriz

City

Tabriz

Province

East Azarbaijan

Postal code

5166614766

Approval date

2026-06-08, 1405/03/18

Ethics committee reference number

IR.TBZMED.REC.1405.178

Health conditions studied

1

Description of health condition studied

Meibomian gland dysfunction of the eyelid

ICD-10 code

H02.8

ICD-10 code description

Other specified disorders of eyelid

Primary outcomes

1

Description

Severity of eyelid Meibomian gland dysfunction following oral Vitamin D intake

Timepoint

At the start of the study and following the oral weekly vitamin D intake for eight weeks

Method of measurement

slit-lamp biomicroscopy

Secondary outcomes

empty

Intervention groups

1

Description

Intervention Group: Eighteen individuals diagnosed with Meibomian gland dysfunction who have Vitamin D levels below 50 ng/mL will undergo an intervention involving oral Vitamin D supplementation (50,000 IU capsules taken once weekly). After eight weeks of treatment, changes in their Meibomian gland dysfunction will be re-evaluated using slit-lamp biomicroscopy.

Category

Treatment - Drugs

2

Description

Control group: Patients with Meibomian gland dysfunction: Eighteen individuals suffering from Meibomian gland dysfunction who have Vitamin D levels below 50 ng/mL will undergo a placebo intervention, and changes in their Meibomian gland dysfunction will be assessed after eight weeks.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center
Nikookari Eye Hospital

Full name of responsible person
Rana Sorkhabi

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Nikookari Hospital, Opposite Police Station No.12, Abbasi Street, Tabriz

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Tabriz University of Medical Sciences

Full name of responsible person
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Deputy for Research and Technology, Tabriz University of Medical Sciences, Golgasht Ave, Azadi Street, Tabriz

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Grant name

Grant code / Reference number

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

Title of funding source
Tabriz 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
Tabriz University of Medical Sciences

Full name of responsible person
Rana Sorkhabi

Position
Professor

Latest degree
Subspecialist

Other areas of specialty/work
Ophthalmology

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Person responsible for updating data

Contact

Name of organization / entity

Tabriz University of Medical Sciences

Full name of responsible person

Rana Sorkhabi

Position

Professor

Latest degree

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available