

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparing the effectiveness of the four-drug regimen containing levofloxacin with the effectiveness of the four-drug regimen containing metronidazole in the treatment of Helicobacter pylori eradication

Protocol summary

Eradication of Helicobacter pylori, occurrence of drug side effects

Study aim

Comparing the efficacy of levofloxacin and metronidazole regimens in the quadruple treatment of Helicobacter pylori eradication

Design

A clinical trial with a control group with parallel groups, randomized with blocks, one-sided blind, randomized phase 3 on 162 patients.

Settings and conduct

In this single-blind clinical trial, patients referred to the Gastroenterology Clinic of Taleghani Hospital, Tehran, suffering from Helicobacter pylori are admitted. Division of groups will be 1:1 with parallel arms and using random blocks (block size four). The first group will receive the quadruple treatment of omeprazole, bismuth, amoxicillin and levofloxacin and the second group will receive the quadruple treatment of omeprazole, bismuth, amoxicillin and metronidazole. The duration of treatment is 14 days. Before and after the intervention, patients are evaluated for Helicobacter pylori infection with stool antigen test. Patients will be referred to evaluate the root of Helicobacter pylori two weeks after the end of the treatment.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Helicobacter pylori-positive patients.
Exclusion criteria: previous allergic reaction to antibiotics (amoxicillin, clarithromycin, tinidazole), patients taking probiotics and proton pump inhibitors (esomeprazole), occurrence of side effects due to simultaneous use of four drugs and the need to stop taking one of medications, pregnancy

Intervention groups

The first group will receive the quadruple treatment of omeprazole, bismuth, amoxicillin and levofloxacin and the second group will receive the quadruple treatment of omeprazole, bismuth, amoxicillin and metronidazole.

Main outcome variables

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20240311061259N1**

Registration date: **2024-10-10, 1403/07/19**

Registration timing: **registered_while_recruiting**

Last update: **2024-10-10, 1403/07/19**

Update count: **0**

Registration date

2024-10-10, 1403/07/19

Registrant information

Name

Amir Sadeghi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 2243 2526

Email address

amirsadeghimd@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-10-06, 1403/07/15

Expected recruitment end date

2025-01-19, 1403/10/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date
empty

Scientific title
Comparing the effectiveness of the four-drug regimen containing levofloxacin with the effectiveness of the four-drug regimen containing metronidazole in the treatment of Helicobacter pylori eradication

Public title
Comparing the effect of levofloxacin with metronidazole in the eradication of Helicobacter pylori

Purpose
Treatment

Inclusion/Exclusion criteria
Inclusion criteria:
positive helicobacter pylori
Exclusion criteria:
History of previous eradication therapy for Helicobacter pylori History of gastrectomy Stomach malignancy (including adenocarcinoma and lymphoma) Use of antibiotics (amoxicillin, clarithromycin, tinidazole) in the last four weeks

Age
From **18 years** old to **70 years** old

Gender
Both

Phase
3

Groups that have been masked
No information

Sample size
Target sample size: **162**

Randomization (investigator's opinion)
Randomized

Randomization description
Patients are assigned to two groups using the random block method. The number of blocks will be 22 and in each block, two, four or six patients will be included in the study order. Random allocation of blocks of patients to two intervention groups will be done through Sealed Envelope online software. By referring to <https://www.sealedenvelope.com/simple-randomiser/v1/lists> by specifying the total number of samples, the number of possible samples in each randomized block (2, 4 and 6 patients) randomization by online software is done For example, like the following output: block identifier block size sequence within block treatment 1 2 1 Group B 1 2 2 Group A 2 4 1 Group A 2 4 2 Group B 2 4 3 Group B 2 4 4 Group A 3 2 1 Group A 3 2 2 Group B ... which is the block number, the number of patients in the block, and the random assignment of each patient (with the corresponding number) to the treatment group. The randomized list of blocks will be placed in sealed envelopes and will be provided to the gastroenterologist on a daily basis.

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids
empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee in Biomedical Research, Gastroenterology and Liver Research Institute, Shahid Behes

Street address
Arabi street, Velenjak

City
Tehran

Province
Tehran

Postal code
1985717443

Approval date
2024-08-20, 1403/05/30

Ethics committee reference number
IR.SBMU.MSP.REC.1403.286

Health conditions studied

1

Description of health condition studied
Helicobacter pylori

ICD-10 code
B96.81

ICD-10 code description
Helicobacter pylori [H. pylori] as the cause of diseases classified elsewhere

Primary outcomes

1

Description
Helicobacter pylori eradication

Timepoint
Before the intervention and 14 days after the intervention

Method of measurement
stool antigen test

Secondary outcomes

1

Description
side effect of drugs

Timepoint

During the intervention and after the completion of the intervention

Method of measurement

History and clinical examination

Intervention groups**1****Description**

Intervention group: Receiving quadruple therapy of omeprazole, bismuth, amoxicillin and levofloxacin

Category

Treatment - Drugs

2**Description**

Intervention group: receiving quadruple therapy of omeprazole, bismuth, amoxicillin and metronidazole

Category

Treatment - Drugs

Recruitment centers**1****Recruitment center****Name of recruitment center**

Gastroenterology and Liver Clinic of Taleghani Hospital

Full name of responsible person

Mohammad Javad Ehsani Ardakani

Street address

Arabi street, Velenjak

City

Tehran

Province

Tehran

Postal code

1985717413

Phone

+98 21 2303 1505

Email

info@sbmu.ac.ir

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Afshin Zarghi

Street address

Arabi street, Velenjak

City

Tehran

Province

Tehran

Postal code

1985717443

Phone

+98 21 23871

Email

info@sbmu.ac.ir

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Shahid Beheshti 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**

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Mahshid Malekian

Position

resident

Latest degree

Specialist

Other areas of specialty/work

Internal Medicine

Street address

Arabi street, Velenjak

City

Tehran

Province

Tehran

Postal code

1985717443

Phone

+98 21 2243 2525

Email

mahshidmalekian2023@gmail.com

Person responsible for scientific inquiries**Contact****Name of organization / entity**

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Amir Sadeghi

Position

Associate professor J

Latest degree

Subspecialist

Other areas of specialty/work

Internal Medicine

Street address

Arabi street, Velenjak

City

Tehran

Province

Tehran

Postal code

1985717443

Phone

+98 21 2243 2525

Email

amirsadeghimd@yahoo.com

Person responsible for updating data**Contact****Name of organization / entity**

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Amir Sadeghi

Position

Associate professor

Latest degree

Subspecialist

Other areas of specialty/work

Internal Medicine

Street address

Arabi street, Velenjak

City

Tehran

Province

Tehran

Postal code

1985717443

Phone

+98 21 2243 2525

Email

amirsadeghimd@yahoo.com

Sharing plan**Deidentified Individual Participant Data Set (IPD)**

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

Protecting patients' privacy and confidentiality

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

No - There is not a plan to make this available

Clinical Study Report

Yes - There is 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

Title and more details about the data/document

Only the information related to the study protocol, the statistical analysis plan and the clinical study report will be made available to the requestors (and not publicly) to other researchers for guidance for further studies.

When the data will become available and for how long

After the publication of the article

To whom data/document is available

Researchers, students and professors in the field of gastroenterology

Under which criteria data/document could be used

For use in further research and if the source is cited

From where data/document is obtainable

corresponding author Dr Amir Sdaeghi
amirsadeghimd@yahoo.com

What processes are involved for a request to access data/document

Send a request via email to the responsible author and mention the reason for the request and how to use the data

Comments