

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 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

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

Eradication of Helicobacter pylori, occurrence of drug side effects

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 tens

Comments