

Clinical Trial Protocol

Iranian Registry of Clinical Trials

30 Jun 2026

In- Vivo Bioequivalence study of Rivaroxaban tablet 10 and 20mg Jaber-ebne Hayyan Pharma with brand drug (XARELTO® 10 and 20mg Bayer, Germany) in Iranian healthy volunteers.

Protocol summary

Study aim

In- Vivo Bioequivalence study of Rivaroxaban tablet 10 and 20mg Jaber-ebne Hayyan Pharma with brand drug (XARELTO® 10 and 20mg Bayer, Germany) in Iranian healthy volunteers.

Design

Single dose, randomized, two sequences, two period crossover with a washout period.

Settings and conduct

This study will be conducted in one-way, cross-over and fasting, and on two sets of healthy volunteers. The study will be conducted in two periods of 72 hours. The interval between these two periods, which is called the wash-out time, is determined by the half-life of the drug plasma, which according to scientific sources should be at least 5 to 7 half-life of the drug in the case of the drug under study. The plan will take a week to clean up the drug, given the biological half-life of the drugs in the drug form. In the first round, candidates are divided into two groups, and the first group receives a test tablet and the second group receives a similar tablet. Blood samples will be taken by the volunteer by the technician immediately after taking the drug, and the preparation steps of the samples, including plasma separation and drug extraction, are performed to analyze the amount of drug on them.

Participants/Inclusion and exclusion criteria

24 participants will be selected from non-smoking, not pregnant people with no history of heart, kidney and liver disease or dis functions with both sex (male&female). The ages and BMIs of participant should be in the range of 18-60 and 18-28 respectively

Intervention groups

Intervention group Single dose Rivaroxaban tablet 10 and 20mg Jaber-ebne Hayyan Pharma Company with brand drugs (Xarelto® 10 & 20mg Bayer, Germany)

Main outcome variables

Determination of blood drug concentration.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200105046010N27**

Registration date: **2021-04-05, 1400/01/16**

Registration timing: **prospective**

Last update: **2021-04-05, 1400/01/16**

Update count: **0**

Registration date

2021-04-05, 1400/01/16

Registrant information

Name

Javad Shokri

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 41 3661 4125

Email address

shokri.j@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-06-04, 1400/03/14

Expected recruitment end date

2021-12-01, 1400/09/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

In- Vivo Bioequivalence study of Rivaroxaban tablet 10 and 20mg Jaber-ebne Hayyan Pharma with brand drug (XARELTO® 10 and 20mg Bayer, Germany) in Iranian healthy volunteers.

Public title

In-vivo Bioequivalence Test of Rivaroxaban® tablet with brand drugs (Xarelto® Bayer, Germany).

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

General health Body mass index(18-28) Informed consent Age(18-60)

Exclusion criteria:

Smoking A history of cardiovascular disease A history of liver & kidney disease Pregnancy Alcohol & Drug addiction Hypersensitivity to the drug

Age

From **18 years** old to **60 years** old

Gender

Both

Phase

Bioequivalence

Groups that have been masked

- Participant

Sample size

Target sample size: **24**

Randomization (investigator's opinion)

Randomized

Randomization description

Random allocation law will be used for randomization of volunteers in this study. This method represents a large block for the total sample size, which means that a balance in the number of people assigned to each group will be obtained at the end of the study. By this method, sequences 1(subjects no: 1-12) and sequences 2 (subjects no: 13-24) will be selected by using a simple paper lottery. the first and second 12 persons will be considered as sequence 1 (Group A) and sequence 2 (Group B) respectively.

Blinding (investigator's opinion)

Single blinded

Blinding description

Candidates are not aware of the test drug or brand name. In a one-blind study, information that could distort the test result is hidden from the candidates, but the person in charge of the test is aware of it. Tramadol and Tramadol are removed from their packaging by the executor and placed in similar and coded cans. Volunteers will not be informed about receiving the brand or test dosage form.

Placebo

Not used

Assignment

Crossover

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics Committee, Tabriz University of Medical Sciences

Street address

Third floor of TUMS (Tabriz University of Medical Sciences) central building, Dneshgah St. Tabriz, Iran

City

Tabriz

Province

East Azarbaijan

Postal code

5166614766

Approval date

2021-03-01, 1399/12/11

Ethics committee reference number

IR.TBZMED.REC.1399.1115

Health conditions studied**1****Description of health condition studied**

In this study, the disease is not examined. Subject bioequivalence test and reference tablets Teriflunomide studied.

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Determination of blood drug concentration.

Timepoint

Sampling times in this study will be 0, 1, 2, 2:30, 3, 3:20, 3:40, 4, 4:20, 4: 40, 5, 6, 8, 10, 12, 24, 48, 72 hours After prescribing the tablet.

Method of measurement

High Performance Liquid Chromatography with tandem mass spectroscopy detector

Secondary outcomes

empty

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

Intervention group: Intervention group received one test drug table(Rivaroxaban tablet 10 and 20mg Jaber-ebne

Hayyan Pharma). Blood samples were taken from the volunteers for 72 hours at the mentioned times after drug administration and the concentration of Rivaroxaban in blood samples was measured by liquid chromatography with mass spectroscopy detector.

Category

Treatment - Drugs

2**Description**

Control group: Control group received one reference drug table(Rivaroxaban tablet 10 and 20mg Xarelto® Bayer, Germany). Blood samples were taken from the volunteers for 72 hours at the mentioned times after drug administration and the concentration of Rivaroxaban in blood samples was measured by liquid chromatography with mass spectroscopy detector.

Category

Treatment - Drugs

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

Simin Baspar Teyf Gostar Company

Full name of responsible person

Javad Shokri

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No.48, Ferdos Street

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5167874434

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

Jaber Ibn Hayyan Pharmaceutical Company

Full name of responsible person

Mahdi Madanchi

Street address

Km 4 Karaj road , Tehran

City

Tehran

Province

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1654613111

Phone

+98 21 4450 3323

Email

HeadOffice@jaber-pharma.com

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

No

Title of funding source

Tabriz University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Other

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

Tabriz University of Medical Sciences

Full name of responsible person

Javad Shokri

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Medical Pharmacy

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Position

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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

These data are as secure between researcher and related industries

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Only protocol and methods of study are sharable

When the data will become available and for how long

Only protocol and methods of study are sharable.

To whom data/document is available

Pharmaceutical and medical sciences researchers

Under which criteria data/document could be used

Projects information's for any publications is not allowed.

From where data/document is obtainable

By email to the project manager (shokri.j@gmail.com)

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

This information is confidential and is at the disposal of the project sponsor. Upon request, the information will be provided to the applicant by the contractor's email after the

Comments