Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Jul 2026

Bioequivalence evaluation of Metoprolol succinate Tablet 47.5 mg of Raha Pharmaceutical company

Protocol summary

Study aim
Bioequivalence study of Metoprolol succinate manufactured by Raha pharmaceutical company

Design
Clinical trials of single blind design of 24 volunteers with controlled group.

Settings and conduct
After selecting the volunteers, Metoprolol succinate drug manufactured by Raha pharmaceutical Company from Iran and FDA approved Metoprolol succinate will be prescribed to them orally in two doses with an interval of 7 days. Volunteers are blinded. For example, if in the first period of the drug administration, the volunteer received the drug manufactured by Raha pharmaceutical company, in the next turn, the volunteer will receive FDA approved Metoprolol succinate . Each time the amount of 6 cc of blood before drug administration and at times of 0, 1, 2, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 9, 10, 11, 12, 14, 24, 36, 48 hour, It will be taken from the volunteers 24 and 48 hours after the medication is prescribed. Samples were collected in Anticoagulant tube collection tubes. The tubes were centrifuged and plasma samples were stored at -80 ℃ . Finally, the amount of drug in each sample is determined by Lc Mass Mass equipment.

Participants/Inclusion and exclusion criteria
Healthy volunteers, no history of diseases affecting the pharmacokinetic processes of the drug, no chronic or acute use of any drug at least 1 week before starting the study

Intervention groups
Volunteers will divided in two groups: On the first week, group one will receive metoprolol succinate manufactured by Raha pharmaceutical company and group number two will receive FDA approved metoprolol succinate . On the second week, group number one will receive FDA approved metoprolol succinate and group number two will receive metoprolol succinate manufactured by Raha pharmaceutical company (cross over)

Main outcome variables
Maximum plasma concentration; area under the curve; the time take to reach maximum plasma concentration

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20200625047913N8**
Registration date: **2022-10-06, 1401/07/14**
Registration timing: **prospective**

Last update: **2022-10-06, 1401/07/14**
Update count: **0**

Registration date
2022-10-06, 1401/07/14

Registrant information

Name
Tayebeh Ghari

Name of organization / entity
Hezareh Sevom Futuristic Pharmacist Company

Country
Iran (Islamic Republic of)

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+98 21 8865 2343

Email address
info@hezareh-co.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-10-19, 1401/07/27

Expected recruitment end date
2022-11-10, 1401/08/19

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Bioequivalence evaluation of Metoprolol succinate Tablet 47.5 mg of Raha Pharmaceutical company

Public title

Bioequivalence evaluation of Metoprolol succinate Tablet 47.5 mg of Raha Pharmaceutical company

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria:

18 to 45 years old Sex: Males and/or non-pregnant, non-lactating females BMI: 18.5 to 24.9 weight in kg/(height in meter) Able to communicate effectively with study personnel and willingness to follow the protocol requirements as evidenced by written informed consent A physical examination with no clinically significant finding and laboratory normal tests Do not take any chronic or acute medication for at least 1 week before the start of the study No history of diseases affecting the pharmacokinetic processes of the drug

Exclusion criteria:

History of allergic responses to Metoprolol succinate or other related drugs, or any of its formulation ingredients Have significant diseases (which might compromise the haemopoeitic, gastrointestinal, renal, hepatic, cardiovascular, respiratory, central nervous system, diabetes, psychosis or any other body system) or clinically significant abnormal findings during screening History or presence of bronchial asthma Smokers who smoke 10 or more cigarettes per day or 20 or more biddies per day or those who cannot refrain from smoking during the study period History or evidence of drug dependence or of alcoholism or of moderate alcohol use History of difficulty with donating blood or difficulty in accessibility of veins Volunteers who have received a known investigational drug within five elimination half life of the administered drug prior to the initial dose of study drug or who have participated in a clinical drug study or bioequivalence study within 90 days prior to the initial dose of study drug, whichever is greater Found positive in urine test for drugs of abuse done before check-in of period History of difficulty in swallowing, or of any gastrointestinal disease which could affect drug absorption

Age

From **18 years** old to **45 years** old

Gender

Both

Phase

Bioequivalence

Groups that have been masked

No information

Sample size

Target sample size: **24**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of institute of pharmaceutical science of Tehran University of Medical Sciences

Street address

16 Azar Avenue, Tehran University of Medical Sciences, Faculty of Pharmacy, The Institute of Pharmaceutical Sciences, 2nd floor, Unit 1-219, Tehran- Iran.

City

Tehran

Province

Tehran

Postal code

۱۴۱۷۶۱۴۴۱۱

Approval date

2022-09-26, 1401/07/04

Ethics committee reference number

IR.TUMS.TIPS.REC.1401.054

Health conditions studied

1

Description of health condition studied

-

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Plasma concentration

Timepoint

At the beginning of the study and 1، 2، 3، 5/3، 4، 5/4، 5، 5/5، 6، 5/6، 7، 5/7، 8، 9، 10، 11، 12، 14، 24، 36، 48 hour after the beginning of the study

Method of measurement

LC Mass/Mass

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Metoprolol succinate 47.5 mg tablets made by Raha pharmaceutical company from Iran will prescribe in the first week at fast condition and blood samples will draw in determined intervals.
Category
N/A

2

Description
Control group: Metoprolol succinate 47.5 mg tablets made by Astrazerneca pharmaceutical company from America will prescribe in the second week at fast condition and blood samples will draw in determined intervals.
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Hezareh Sevom Futuristic Pharmacist Company
Full name of responsible person
Tayebeh Ghari
Street address
Unit 4, No. 81, Babak Bahrami st, After Zafar st, Tehran, Iran.
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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1968655815
Phone
+98 21 8865 2343
Email
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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
Hezareh Sevom Futuristic Pharmacist
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
Alborze University of Medical Sciences, School of Pharmacy
Full name of responsible person
Faranak Salmannejad
Position
Assistant Professor
Latest degree
Ph.D.
Other areas of specialty/work
Medical Pharmacy
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

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
Yes - There is a plan to make this available

Clinical Study Report
Yes - There is a plan to make this available

Analytic Code
Yes - There is 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
All data is potentially shareable after unidentified individuals.

When the data will become available and for how long
from 2023

To whom data/document is available
People working in industry and academia

Under which criteria data/document could be used
People working in industry and academia

From where data/document is obtainable
- Sending email to info@hezareh-co.com - Sending fax to 00982188208678 - Calling to 00982188652343 - Responsible person: Tayebeh Ghari

What processes are involved for a request to access data/document
Sending email to info@hezareh-co.com/ request evaluation/sending data

Comments