

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

Evaluation of therapeutic effects of Metronidazole In Inpatients with Pneumonia Due to COVID-19

Protocol summary

Study aim

Determination of therapeutic effects of Metronidazole In Inpatients with Pneumonia Due to COVID-19

Design

Clinical trial with control group, single-blind, randomized, phase 2 on 15 patients and will follow for 7 days. Inpatient admission dates will be used for randomization.

Settings and conduct

This pilot randomized single-blind clinical trial will be performed in Shohada Goharshahi hospital on patients after obtaining permission from the ethics committee on patients with pneumonia caused by the COVID-19, who are on antiviral medication according to national protocol. Patients will be divided into two groups. Intervention group will be treated with metronidazole 250 mg every 6 hours. Laboratory and clinical symptoms will be evaluated every 7 days. The data will be analyzed by SPSS software.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Hospitalized patients with COVID-19 pneumonia. COVID-19 infection should be confirmed by RT-PCR or lung CT scan. Both genders. Age ≥ 18 years at time of signing Informed Consent Form. Willing and able to provide written informed consent prior to performing study to any assigned treatment arm. Must agree not to enroll in another study of an investigational agent prior to completion of study. Exclusion criteria: Known allergic reaction to metronidazole. Pregnant or breastfeeding, or positive pregnancy test.

Intervention groups

Patients with pneumonia due to COVID-19 will receive Standard of care treatment according to the national guidelines. Intervention group will receive metronidazole 250 mg every 6 hours. In addition to standard treatment and control group will not receive metronidazole.

Main outcome variables

O₂ Saturation, Length of hospital stay

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200608047686N1**

Registration date: **2020-06-30, 1399/04/10**

Registration timing: **registered_while_recruiting**

Last update: **2020-06-30, 1399/04/10**

Update count: **0**

Registration date

2020-06-30, 1399/04/10

Registrant information

Name

Muhanna Kazempour

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 5541 7243

Email address

muhannakazempour@sbmu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-05-31, 1399/03/11

Expected recruitment end date

2020-07-01, 1399/04/11

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of therapeutic effects of Metronidazole In Inpatients with Pneumonia Due to COVID-19

Public title

The role of metronidazole in COVID-19

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Inpatients with Pneumonia Due to COVID-19

Exclusion criteria:

Hypersensitivity Reactions to Metronidazole Pregnancy

Age

From **18 years** old

Gender

Both

Phase

2

Groups that have been masked

- Participant

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

simple randomization

Blinding (investigator's opinion)

Single blinded

Blinding description

After signing the consent form, According to the admission date of hospitalized patients with pneumonia due to COVID-19, Participants are randomly assigned to intervention or control groups and they are not aware of the group to which they are allocated.

Placebo

Not used

Assignment

Parallel

Other design features

According to the admission date of hospitalized patients with pneumonia due to COVID-19, Participants are randomly assigned to intervention or control groups and they are not aware of the group to which they are allocated. The "intervention group" receives national standard treatment in addition to metronidazole, and the "control group" receives standard treatment.

Secondary Ids

empty

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

Ethics committee of Shahid beheshti University of Medical Sciences

Street address

Yaman St, Velenjak, Shahid Chamran Highway

City

Tehran

Province

Tehran

Postal code

19857-17443

Approval date

2020-05-30, 1399/03/10

Ethics committee reference number

IR.SBMU.RETECH.REC.1399.157

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

COVID-19

ICD-10 code

U07.1

ICD-10 code description

COVID-19

Primary outcomes**1****Description**

O2 Saturation

Timepoint

within 7 days from initiation of study treatmentat

Method of measurement

Pulse Oximetry

Secondary outcomes**1****Description**

Lenght of hospitat stay

Timepoint

daily up to discharge

Method of measurement

Inpatient days

2**Description**

Mortality

Timepoint

daily up to death during hospitalizatiion

Method of measurement

Patient death

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

Intervention group: 15 eligible patients with moderate to severe COVID-19 in a 1:1 ratio compared to the control group who receive 250 mg metronidazole tablets orally

every 6 hours for 7 days in addition to the standard treatment.

Category

Treatment - Drugs

2

Description

Control group: 15 eligible patients with moderate to severe COVID-19 disease who receive national standard treatment for COVID-19.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Shohada Gomnam Hospital

Full name of responsible person

Muhanna Kazempour

Street address

Shahid Mohammad Reza Azam Erfani St, Khorasan Square

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shgm-hospital@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

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Yaman St, Velenjak St, Shahid Chamran Highway

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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

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

Muhanna Kazempour

Position

Associate professor

Latest degree

Specialist

Other areas of specialty/work

Internal Medicine

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Muhanna Kazempour

Position

Associate professor

Latest degree

Specialist

Other areas of specialty/work

Internal Medicine

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Person responsible for updating data

Contact

Name of organization / entity
Shahid Beheshti University of Medical Sciences
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Position
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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

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

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

At the time of publication

When the data will become available and for how long

At the time of publication

To whom data/document is available

Public

Under which criteria data/document could be used

They will be publically available.

From where data/document is obtainable

The study protocol, statistical analytic plan informed consent forms will be shared as supplementary material at the time of publication of results.

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

The study protocol, statistical analytic plan informed consent forms will be shared as supplementary material at the time of publication of results.

Comments