

Clinical Trial Protocol

Iranian Registry of Clinical Trials

23 Feb 2026

Efficacy and safety evaluation of therapeutic regimen of lopinavir/ritonavir and interferon beta 1b in patients with COVID-19

Protocol summary

Study aim

efficacy and safety evaluation of interferon beta 1b in therapeutic regimen based on clinical, vital sign and laboratory results in patients with COVID-19

Design

This study is a prospective non-randomized clinical trial with control group in phase 2-3 and sample size of 35.

Settings and conduct

This trial will be done in Ibn Sina hospital of Sari and including patients who admitted in hospital in separated period of time and received national therapeutic guideline of COVID 19 without interferon beta 1b (within 2 weeks before proposal approval) and will receive with interferon beta 1b .

Participants/Inclusion and exclusion criteria

Patients with more than 18 years old and who are highly suspected or definitely diagnosed with COVID 19 and candidate receiving recommended therapeutic regimen. patients who have allergy to any drugs of therapeutic regimen , pregnancy, lactation, renal and hepatic failure, thyroid disorder and untreated severe depression and seizure history will be excluded.

Intervention groups

Intervention group: Standard of care treatment according to the national guidelines for the treatment of COVID-19 including hydroxychloroquine 400 mg stat and lopinavir/ritonavir 200/50 mg two tablets twice daily plus interferon beta 1b for at least 3 doses of 250 mcg subcutaneous. Control: Patients with inclusion criteria and received national therapeutic guideline in separated time before proposal approval.

Main outcome variables

Clinical efficacy according to clinical (respiratory system, O2 saturation, fever and cough) and laboratory response (CRP, LDH, CBC) and safety evaluation according to patients tolerably.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190804044429N1**

Registration date: **2020-04-11, 1399/01/23**

Registration timing: **registered_while_recruiting**

Last update: **2020-04-11, 1399/01/23**

Update count: **0**

Registration date

2020-04-11, 1399/01/23

Registrant information

Name

Monireh Ghazaeian

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 8863 6864

Email address

ghazaeianm@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-03-25, 1399/01/06

Expected recruitment end date

2020-06-25, 1399/04/05

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Efficacy and safety evaluation of therapeutic regimen of lopinavir/ritonavir and interferon beta 1b in patients with COVID-19

Public title

Interferon beta 1b in COVID-19

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

All adult patients with highly suspected or confirmed COVID-19 who are candidate for hospitalization and starting therapeutic regimen with lopinavir/ritonavir and hydroxychloroquine

Exclusion criteria:

History of allergy to any drugs of therapeutic regimen , pregnancy and lactation, renal and hepatic disease, heart failure, uncontrolled depression and untreated thyroid disorders and seizure history.

Age

From **18 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **70**

Randomization (investigator's opinion)

N/A

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features

Control group in this study is defined as patients who admitted in hospital and received national therapeutic regimen for COVID-19 before the approval of the study proposal compatible with inclusion criteria.

Secondary Ids

empty

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

Ethics committee of Mazandaran University of Medical Sciences

Street address

Ibn Sina Hospital, Pasdaran Blvd, Sari, Mazandaran.

City

Sari

Province

Mazandaran

Postal code

4815733971

Approval date

2020-03-24, 1399/01/05

Ethics committee reference number

IR.MAZUMS.REC.1399.005

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

COVID-19 pneumonia

ICD-10 code

U07.1

ICD-10 code description

COVID-19, virus identified

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

Clinical response to therapeutic regimen by respiratory rate

Timepoint

Daily

Method of measurement

physical exam

2**Description**

Clinical response to therapeutic regimen by blood oxygen saturation

Timepoint

daily

Method of measurement

pulse oximeter

3**Description**

Clinical response to therapeutic regimen by fever

Timepoint

daily

Method of measurement

thermometer

4**Description**

therapeutic regimen safety

Timepoint

daily

Method of measurement

patient tolerability

5**Description**

LDH level reduction

Timepoint

three times weekly

Method of measurement

laboratory test

6

Description

CRP level reduction

Timepoint

three times weekly

Method of measurement

laboratory test

7

Description

lymphocyte count recovery

Timepoint

daily

Method of measurement

laboratory test

8

Description

Cough recovery

Timepoint

daily

Method of measurement

physical exam

Secondary outcomes

1

Description

injection site reactions,

Timepoint

Daily

Method of measurement

history taking

2

Description

Hospital stay duration

Timepoint

End of treatment

Method of measurement

Patient file

3

Description

Mortality rate

Timepoint

Daily

Method of measurement

patient file

4

Description

flu-like symptoms

Timepoint

Daily

Method of measurement

history taking

5

Description

liver enzymes changing

Timepoint

twice weekly

Method of measurement

laboratory test

Intervention groups

1

Description

Intervention group: National therapeutic guideline including hydroxychloroquine 400 mg stat and lopinavir/ritonavir plus 250 mcg interferon beta 1 b subcutaneous injection every other day for at least 3 doses

Category

Treatment - Drugs

2

Description

Control group: Patients with inclusion criteria and received national therapeutic guideline within two weeks before proposal approval.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Ibn Sina Hospital

Full name of responsible person

Monireh Ghazaeian

Street address

Ibn Sina hospital, Pasdaran Blvd, Sari, Mazandaran province.

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ghazaeianm@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Mazandaran University of Medical Sciences

Full name of responsible person

Majid Saeedi

Street address

Vice Chancellor for Research, Mazandaran University of Medical Sciences, Joybar 3way , Sari, Iran.

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+98 11 3335 2725

Email

majsaeedi@gmail.com

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

Yes

Title of funding source

Mazandaran 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**

Mazandaran University of Medical Sciences

Full name of responsible person

Monireh Ghazaeian

Position

Assistant professor

Latest degree

Specialist

Other areas of specialty/work

Clinical pharmacy

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Ibn Sina hospital, Pasdaran Blvd, Sari, Mazandaran province, Iran.

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Person responsible for scientific inquiries

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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

Undecided - It is not yet known if there will be 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

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

The results of trial including analysis data and method of the study

When the data will become available and for how long

At the time of publication, the data of the study will be available.

To whom data/document is available

academic researchers, medical team and scientific institutes

Under which criteria data/document could be used

For research and practical purposes

From where data/document is obtainable

Dr. Monireh Ghazaeian, Faculty of pharmacy, Mazandaran University of Medical Sciences.

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

The scientific responsible person of the study will reply to the request within 10 days.

Comments