

Clinical Trial Protocol

Iranian Registry of Clinical Trials

23 Feb 2026

Evaluation of the effect of melatonin on improving the symptoms of patients with COVID-19-double-blind randomized clinical trial

Protocol summary

Study aim

Determining the effect of melatonin on improving the symptoms of patients with COVID-19

Design

Clinical trial with control group, double-blind, randomized, phase 3 on 46 patients. In this study, individuals will be randomly assigned to two groups of intervention and control.

Settings and conduct

This clinical trial will be performed on 46 patients aged 18 to 75 years admitted to the intensive care unit of Vali-e-Asr Hospital of Birjand with a diagnosis of COVID-19. All of the steps will be covered by the patient, physician and evaluators.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Age 18 to 75 years; Diagnosis of COVID-19 in the last 24 hours; One of the three following: respiratory rate more than 30 per minutes, O₂ saturation less than or equal to 93% at room temperature, PaO₂/FiO₂ less than or equal to 300 Exclusion criteria: Patients with shock or hemodynamic instability (increase or decrease in blood pressure and irregular heartbeat); GFR less than 30 ml/minute; History of cirrhosis, hepatitis and severe liver diseases; History of hypertension, depression and epilepsy; Patients with a history of allergic reaction or allergy to melatonin; Patients receiving chemotherapy for cancer; Severe diseases of the immune system; Pregnant and lactating women; Use of alcohol and benzodiazepines

Intervention groups

Intervention group: Melatonin tablet 18 mg at night along with standard treatment for 14 days Control group: Melatonin placebo tablet 18 mg at night along with standard treatment for 14 days

Main outcome variables

One-month mortality; Duration of hospitalization in the ICU; Clinical symptoms according to the seven-category ordinal scale; Lymphocyte count; PaO₂/FiO₂ ratio; ESR and CRP levels; AST, ALT and LDH levels

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20150724023315N2**

Registration date: **2021-07-18, 1400/04/27**

Registration timing: **prospective**

Last update: **2021-07-18, 1400/04/27**

Update count: **0**

Registration date

2021-07-18, 1400/04/27

Registrant information

Name

Mahmoud Ganjifard

Name of organization / entity

Birjand University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 56 3238 1338

Email address

ganjim@bums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-07-23, 1400/05/01

Expected recruitment end date

2021-12-22, 1400/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of the effect of melatonin on improving the symptoms of patients with COVID-19-double-blind randomized clinical trial

Public title

Evaluation of the effect of melatonin in the treatment of patients with COVID-19

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age 18 to 75 years
Diagnosis of COVID-19 in the last 24 hours
One of the three following: respiratory rate more than 30 per minutes, o₂ saturation less than or equal to 93% at room temperature, PaO₂/FiO₂ less than or equal to 300
Female patients should not be pregnant and should not become pregnant until 30 days after the end of the study

Exclusion criteria:

Patients with shock or hemodynamic instability (increase or decrease in blood pressure and irregular heartbeat)
GFR less than 30 ml/minute
History of cirrhosis, hepatitis and severe liver diseases
History of hypertension, depression (taking fluvoxamine and other potent CYP1A2 inhibitors) and epilepsy
Patients with a history of allergic reaction or allergy to melatonin
Patients receiving chemotherapy for cancer
Severe diseases of the immune system
Pregnant and lactating women
Use of alcohol and benzodiazepines

Age

From **18 years** old to **75 years** old

Gender

Both

Phase

3

Groups that have been masked

- Participant
- Care provider
- Investigator
- Outcome assessor

Sample size

Target sample size: **46**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients will be randomly divided into two groups of intervention and control using a random number table. First, we create a variable from 1 to 46 in Excel software. Then we create another variable in another column and generate 23 random numbers one and 23 random numbers two with the randomization command. The numbers of one and two are intervention and placebo groups, respectively.

Blinding (investigator's opinion)

Double blinded

Blinding description

All of the steps will be covered by the patient, physician and evaluators. Packaging of the drugs will be exactly identical in both arms of the study. Preparation, packaging, and labeling of the drugs will be performed

by the third person under the supervision of the senior manager of the project.

Placebo

Used

Assignment

Parallel

Other design features

-

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Birjand University of Medical Sciences

Street address

Birjand University of Medical Sciences , Ghaffari Street

City

Birjand

Province

South Khorasan

Postal code

9717853577

Approval date

2020-11-09, 1399/08/19

Ethics committee reference number

IR.BUMS.REC.1399.345

Health conditions studied

1

Description of health condition studied

COVID-19

ICD-10 code

U07.1

ICD-10 code description

COVID-19, virus identified

Primary outcomes

1

Description

One-month mortality

Timepoint

From baseline to end

Method of measurement

Questionnaire

2

Description

Time of death of patients

Timepoint

From baseline to end
Method of measurement
Questionnaire

3

Description
Duration of hospitalization in the ICU
Timepoint
During hospitalization
Method of measurement
Questionnaire

4

Description
Clinical symptoms according to the seven-category ordinal scale
Timepoint
Baseline and then on days 7 and 15
Method of measurement
Questionnaire

5

Description
Lymphocyte count
Timepoint
Baseline and then on days 7 and 15
Method of measurement
Laboratory test

6

Description
PaO₂/FiO₂ ratio
Timepoint
Baseline and then on days 7 and 15
Method of measurement
Laboratory test

7

Description
ESR and CRP levels
Timepoint
Baseline and then on days 7 and 15
Method of measurement
Laboratory test

8

Description
AST, ALT and LDH levels
Timepoint
Baseline and then on days 7 and 15
Method of measurement
Laboratory test

Secondary outcomes

1

Description
Number of patients who need support through mechanical ventilation
Timepoint
From baseline to end
Method of measurement
Questionnaire

2

Description
Discharge from the hospital
Timepoint
From baseline to end
Method of measurement
Questionnaire

3

Description
Fever relief time in patients who had a fever above 37.5 at the time of admission
Timepoint
During hospitalization
Method of measurement
Questionnaire

4

Description
Adverse effects
Timepoint
On the 15th day
Method of measurement
Common Terminology Criteria for Adverse Event (CTCAE) version 5.0

Intervention groups

1

Description
Intervention group: Six melatonin tablet 3 mg (Razak pharmaceutical company, Tehran, Iran) at night along with standard treatment for 14 days
Category
Treatment - Drugs

2

Description
Control group: Six Melatonin placebo tablet 3 mg (Industrial Laboratory of Mashhad School of Pharmacy, Mashhad, Iran) at night along with standard treatment for 14 days
Category
Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Vali-e-Asr Educational and Medical Center affiliated to
Birjand University of Medical Sciences

Full name of responsible person

Mahmoud Ganjifard

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Vali-e-Asr Hospital, Ghaffari Street

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Birjand University of Medical Sciences

Full name of responsible person

Toba Kazemi

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research@bums.ac.ir

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

Yes

Title of funding source

Birjand 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**

Birjand University of Medical Sciences

Full name of responsible person

Mahmoud Ganjifard

Position

Associate Professor

Latest degree

Specialist

Other areas of specialty/work

Anesthesiology

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Latest degree

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Person responsible for updating data

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Undecided - It is not yet known if there will be 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

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