Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 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)

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+98 56 3238 1338

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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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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