Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

Investigation of simultaneous administration of biotin, brewer’s yeast, and vitamin C supplements on the improvement of clinical symptoms in patients with COVID-19

Protocol summary

Study aim
Due to the role of biotin, brewer's yeast, and vitamin C in improving the symptoms of diseases such as influenza and cold, the aim of the present study is to evaluate the effect of these supplements on the improvement of clinical symptoms associated with COVID-19.

Design
The clinical trial consists of a control group with parallel, non-blind, randomized, phase 3 on 50 patients and, a random number table will be used for randomization.

Settings and conduct
In this study, 50 male patients who have referred to Shariati Hospital with a positive chest CT scan for COVID-19 will be selected. After completing the consent form and questionnaire, patients will be divided randomly into two groups according to inclusion and exclusion criteria. In addition to their routine treatment, one group will receive three biotin tablets (5000 micrograms) on the first day, two biotin tablets (5,000 micrograms) on the second and third day, and one biotin tablet (5,000 micrograms) on the fourth to eighth days. In addition to biotin, one effervescent tablet of vitamin C (500 mg) and two tablets of brewer's yeast for 10 days will be received, daily. The control group will receive only routine Covid-19 treatment.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Age between 20 to 60 years; Male sex; Patients whose chest CT scan is positive for COVID-19; Exclusion criteria: Infectious diseases, cancer, and autoimmune diseases; Severe heart and liver diseases; Existence of severe clinical symptoms that require; hospitalization; Diabetes

Intervention groups
In addition to routine treatment, the intervention group will receive biotin, brewer's yeast, and vitamin C supplements for 10 days. The control group will have its own routine treatment.

Main outcome variables
Clinical symptoms improvement

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20201004048923N1**
Registration date: **2020-12-13, 1399/09/23**
Registration timing: **registered_while_recruiting**

Last update: **2020-12-13, 1399/09/23**
Update count: **0**

Registration date
2020-12-13, 1399/09/23

Registrant information
Name
Shadi Seyyed Ebrahimi
Name of organization / entity
Country
Iran (Islamic Republic of)
Phone
+98 21 6405 3293
Email address
ebrahimi_sh@sina.tums.ac.ir

Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2020-10-15, 1399/07/24
Expected recruitment end date
2021-01-14, 1399/10/25
Actual recruitment start date
empty
Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Investigation of simultaneous administration of biotin, brewer’s yeast, and vitamin C supplements on the improvement of clinical symptoms in patients with COVID-19

Public title

Effect of biotin, brewer’s yeast and vitamin C supplements in patients with COVID-19

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age between 20 to 60 years old Male sex COVID-19 patients with positive chest CT scan

Exclusion criteria:

Infectious diseases, cancer and autoimmune diseases Severe heart and liver diseases Existence of severe clinical symptoms that require hospitalization Diabetes

Age

From **20 years** old to **60 years** old

Gender

Male

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

The stratification layer in this study is age. In order to allocate the same number of people in both groups, stratified randomization was used. Randomization of individuals into intervention and control groups was performed using a random number list created online by Random.org.This list is randomly divided between intervention and control groups from 1 to 50.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tehran University of Medical Sciences

Street address

Bulding No 1, Tehran university of Medical Sciences, Poursina St. Qods St. Enqelab St

City

Tehran

Province

Tehran

Postal code

1417613151

Approval date

2020-09-30, 1399/07/09

Ethics committee reference number

IR.TUMS.MEDICINE.REC.1399.574

Health conditions studied

1

Description of health condition studied

Coronavirus disease 2019 (COVID-19)

ICD-10 code

U07. 1

ICD-10 code description

U07. 1

Primary outcomes

1

Description

Clinical symptoms improvement

Timepoint

At the beginning of the study (before the intervention) and after receiving supplements, daily

Method of measurement

Patient statements during the phone call and recording information according to the scoring system designed in the checklist

Secondary outcomes

1

Description

Fever

Timepoint

At the beginning of the study (before the intervention) and after receiving supplements, daily

Method of measurement

Patient statements during the phone call and recording information according to the scoring system designed in the checklist

2

Description

Chills

Timepoint

At the beginning of the study (before the intervention) and after receiving supplements, daily

Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

3

Description
Fatigue
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

4

Description
Cough
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

5

Description
Shortness of breath
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

6

Description
Headache
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

7

Description
Myalgia
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

8

Description
Earache
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

9

Description
Rhinorrhea
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

10

Description
Sore throat
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

11

Description
Diarrhea
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

12

Description
Nausea or vomiting
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

13

Description
Swelling
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

14

Description
Skin allergy
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

15

Description
Paleness of the fingers and toes
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

16

Description
Smell or taste loss
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

17

Description
Chest pain or discomfort
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

18

Description
Loss of the ability to move or speak
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

19

Description
Insomnia
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

20

Description
Sweating
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

21

Description
Anorexia
Timepoint
At the beginning of the study (before the intervention) and after receiving supplements, daily
Method of measurement
Patient statements during the phone call and recording information according to the scoring system designed in the checklist

Intervention groups

1

Description
Intervention group: Patients in this group, addition to their routine treatment will receive; first day: two biotin tablets (5000 micrograms) simultaneously and after that with at least 6 hours, one another biotin tablet (5000 micrograms), second and third days: two biotin tablets (5,000 micrograms) with at least 8 hours interval. Fourth day up to the end of intervention: one biotin tablet (5,000 micrograms) daily. In addition to biotin, one effervescent tablet of vitamin C (500 mg) and two tablets of brewer's yeast will be received, daily up to the end of intervention.
Category
Treatment - Drugs

2

Description
Control group: Control group will receive only routine COVID-19 treatment.
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Shariati Hospital Emergency
Full name of responsible person
Dr Maliheh Paknejad
Street address
Biochemistry department, Tehran university of Medical Sciences, Poursina St. Qods St. Enqelab St
City
Tehran
Province
Tehran
Postal code
1417613151
Phone
+98 21 6405 3295
Email
paknejadma@tums.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Dr Maliheh Paknejad
Street address
Biochemistry department, Tehran university of Medical Sciences, Poursina St. Qods St. Enqelab St
City
Tehran
Province
Tehran
Postal code
1417613151
Phone
+98 21 6405 3295
Email
paknejadma@tums.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
By researcher
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
Persons

Person responsible for general inquiries

Contact
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Dr Maliheh Paknejad
Position
Professor
Latest degree
Ph.D.
Other areas of specialty/work
Biochemistry
Street address
Biochemistry department, Tehran university of Medical Sciences, Poursina St. Qods St. Enqelab St
City
Tehran
Province
Tehran
Postal code
1417613151
Phone
+98 21 6405 3295
Email
paknejadma@tums.ac.ir

Person responsible for scientific inquiries

Contact
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Dr Maliheh Paknejad
Position
Professor
Latest degree
Ph.D.
Other areas of specialty/work
Biochemistry
Street address
Biochemistry department, Tehran university of Medical Sciences, Poursina St. Qods St. Enqelab St
City
Tehran
Province
Tehran
Postal code
1417613151
Phone
+98 21 6405 3295

Email
paknejadma@tums.ac.ir

Person responsible for updating data

Contact
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Dr Maliheh Paknejad
Position
Professor
Latest degree
Ph.D.
Other areas of specialty/work
Biochemistry
Street address
Biochemistry department, Tehran university of Medical Sciences, Poursina St. Qods St. Enqelab St
City
Tehran
Province
Tehran
Postal code
1417613151
Phone
+98 21 6405 3295
Fax
Email
paknejadma@tums.ac.ir

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
Yes - There is 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
Title and more details about the data/document
Undecided - It is not yet known if there will be a plan to make this available
When the data will become available and for how long
Undecided - It is not yet known if there will be a plan to make this available
To whom data/document is available
Undecided - It is not yet known if there will be a plan to make this available
Under which criteria data/document could be used
Undecided - It is not yet known if there will be a plan to make this available
From where data/document is obtainable
Undecided - It is not yet known if there will be a plan to make this available
What processes are involved for a request to access data/document
Undecided - It is not yet known if there will be a plan to make this available
Comments