Clinical Trial Protocol
Iranian Registry of Clinical Trials

13 Nov 2026

Study of Tocilizumab effect on treatment and clinical symptoms and laboratory signs of Iranian COVID-19 patients: a crinical trial study

Protocol summary

Study aim
Evaluation of Tocilizumab (Actemra) effects on treatment and clinical symptoms and laboratory signs of Iranian COVID-19 patients

Design
This study is a two arm parallel group, double blinded clinical trial in phase 2 which will be carried out on 40 hospitalized COVID-19 patients. Patients randomly divided into two groups (Control group and Tocilizumab group).

Settings and conduct
40 hospitalized COVID-19 patients in Shariati and Imam Khomeini hospitals will be included in this study.

Participants/Inclusion and exclusion criteria
Inclusion Criteria: COVID-19 patient confirmed by positive PCR test for SARS-CoV-19 or abnormal CT scan finding (bilateral, sub pleural, peripheral ground glass opacities), Blood oxygen saturation <93% or respiratory rate> 24, high CRP rate or lymphopenia<1100, and not responding to standard COVID-19 treatment. Exclusion criteria: A history of malignancies, positive pro-calcitonin and active infection (Including latent or active TB infection), a history of taking immunosuppressive drugs and corticosteroids

Intervention groups
Control group: Will receive only standard treatment for COVID-19 disease. Tocilizumab group: In addition to standard treatment will receive 8mg/kg Tocilizumab.

Main outcome variables
Radiographic features findings, Mortality rate, O2 saturation, Need for an oxygen therapy and Laboratory tests

General information

Reason for update
Placebo elimination and and revise the exclusion criteria section

Acronym

IRCT registration information
IRCT registration number: **IRCT20081027001411N4**
Registration date: **2020-07-09, 1399/04/19**
Registration timing: **registered_while_recruiting**

Last update: **2021-01-27, 1399/11/08**
Update count: **1**

Registration date
2020-07-09, 1399/04/19

Registrant information

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2020-04-29, 1399/02/10

Expected recruitment end date
2020-07-31, 1399/05/10

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Study of Tocilizumab effect on treatment and clinical symptoms and laboratory signs of Iranian COVID-19 patients: a crinical trial study

Public title
Effect of TOCILIZUMAB (ACTEMRA) on treatment of COVID-19
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
COVID-19 patients confirmed by positive PCR test for SARS-CoV-19 or confirmed by abnormal CT scan finding (bilateral, sub pleural, peripheral ground glass opacities), With blood oxygen saturation <93%, or respiratory rate> 24 high CRP rate, lymphopenia < 1100 not responding to standard COVID-19 treatment.
Exclusion criteria:
A history of malignancies, positive pro-calcitonin and active infection (Including latent or active TB infection) A history of taking immunosuppressive drugs and corticosteroids
Age
From **18 years** old
Gender
Both

Phase
2
Groups that have been masked

- Participant
- Investigator
- Outcome assessor
- Data analyser

Sample size
Target sample size: **40**
Randomization (investigator's opinion)
Randomized
Randomization description
Block Balanced Randomization Method will be used. Patients will allocate to two groups with permuted balanced block randomization Method. The size of each random block is 4, and 10 blocks will be used for 40 patients. Patients will be allocated equally to the two intervention groups. In this study permuted balanced block randomization will be used. In this permuted balanced block randomization, the blocked size is 4, the allocation ratio is 1, and the number of intervention groups is 2. After specifying the block size, all the potential contribution of the assignments within each group must be calculated, (block size is four, 6 possible balance combinations with two intervention group I and two intervention group II in each block are calculated) and then the blocks are randomly chosen to determine the assignment of all participants. So, the total of the sample size of participants randomized to two treatment groups.
Blinding (investigator's opinion)
Double blinded
Blinding description
In this randomized controlled parallel clinical trials study, the type of blindness is double-blind and the blindness level is partial blinding. Also, in this study, physicians, evaluators of patients, and patients themselves in the groups are not aware of the allocation concealment and the random allocation sequence was produced by the statistical consultant and only one person in the staff allocate the patients to treatment groups based on the sequence of random numbers.
Placebo
Not used
Assignment
Parallel
Other design features
This study is double blinded clinical trial in phase 2 which will be carried out on 40 hospitalized COVID-19 patients. Patients randomly divided into two groups. Control group and treatment group which received of medicine (8mg/kg of Roche Tocilizumab). Clinical signs of patient including heart rate, blood pressure, fever, O2 saturation, laboratory tests result (CBC, Hb, HCT, FBS,TG, Cho, ESR, CRP, VBG, IL-6, Ferritin, CPK, ALT, AST, Troponin, and D-dimer) will be recorded before and after treatment (after 3-5 days of treatment and at discharge time). In addition, dyspnea, cough, GI Symptom, myalgia, and chest pain will be assessed before and after treatment (after 5 days of treatment and at discharge time). In addition, Patients' mortality rates, length of hospitalization, and the need for intubation and oxygen therapy (nasal Cannula, mask Oxygen, reserve Mask, NIV and invasive ventilation) will also be recorded before and after treatment (after 5 days of treatment and at discharge time).

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Vice-Chancellor in Research Affairs Tehran University of Medical Science
Street address
Central Building of Tehran University of Medical Sciences, Qods St., Keshavarz Blvd.
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Postal code
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Approval date
2020-04-26, 1399/02/07
Ethics committee reference number
IR.TUMS.VCR.REC.1399.290

Health conditions studied

1

Description of health condition studied
COVID-19 disease
ICD-10 code

U07.2

ICD-10 code description

COVID-19, virus not identified

Primary outcomes

1

Description

Radiographic features Findings

Timepoint

Before treatment and 6 weeks after treatment

Method of measurement

CT scan

2

Description

Mortality rate

Timepoint

Before and after treatment

Method of measurement

Observation

3

Description

Need an oxygen therapy

Timepoint

Before and after (at day 5 after treatment and discharge time)

Method of measurement

The need on oxygen therapy (Yes or No), If yes: Type of oxygen therapy (nasal cannula, mask oxygen, reserve mask, noninvasive ventilation (NIV), and invasive ventilation)

4

Description

O2 saturation

Timepoint

Before and after (at day 5 after treatment and at discharge time)

Method of measurement

Pulse Oximeter

Secondary outcomes

1

Description

Laboratory tests (including CBC, Hb, HCT, FBS, TG, Cho, ESR, CRP, VBG, IL-6, Ferritin, CPK, ALT, AST, Troponin, and D-dimer)

Timepoint

Before and after (at day 5 after treatment and discharge time)

Method of measurement

Para-clinical

Intervention groups

1

Description

Intervention group: Patients hospitalized with COVID-19 disease will receive 8mg/kg Tocilizumab (Roche) in addition to their standard treatment. If the patients condition is not stable 2 doses by 12 hours will be administrated (maximum dose: 800 mg)

Category

Treatment - Drugs

2

Description

Control group: Patients hospitalized with COVID-19 will receive standard care alone.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Shariati Hospital

Full name of responsible person

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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
Tehran 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
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Full name of responsible person
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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

Yes - There is a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

It will be published as an article

When the data will become available and for how long

After printing the article

To whom data/document is available

All medical professionals and scientiscts

Under which criteria data/document could be used

There is no restriction on access to information

From where data/document is obtainable

Dr. Ahmadreza Jamshidi, Tehran University of Medical Science

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

Refer to the project supervisor

Comments