

# Sulodexide in the treatment of COVID-19

<b>Submission date</b> 31/05/2020	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 04/06/2020	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 08/03/2021	<b>Condition category</b> Infections and Infestations	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

COVID-19 is a condition caused by the coronavirus (called SARS-CoV-2) that was first identified in late 2019. This virus can infect the respiratory (breathing) system. Some people do not have symptoms but can carry the virus and pass it on to others. People who have developed the condition may develop a fever and/or a continuous cough among other symptoms. This can develop into pneumonia. Pneumonia is a chest infection where the small air pockets of the lungs, called alveoli, fill with liquid and make it more difficult to breathe.

In 2020, the virus has spread to many countries around the world and neither a vaccine against the virus or specific treatment for COVID-19 has yet been developed. As of March 2020, it is advised that people minimize travel and social contact, and regularly wash their hands to reduce the spread of the virus.

Groups who are at a higher risk from infection with the virus, and therefore of developing COVID-19, include people aged over 70 years, people who have long-term health conditions (such as asthma or diabetes), people who have a weakened immune system and people who are pregnant. People in these groups, and people who might come into contact with them, can reduce this risk by following the up-to-date advice to reduce the spread of the virus.

The COVID 19 pandemic has caused a severe impact not only for its clinical manifestation, but also the modifications imposed in the daily routine. The rapid dissemination and novelty of pathophysiology has limited the capability of obtaining useful and truthful information. Recently, information has been being obtained on the impact of this disease on the blood vessels.

The aim of this study is to know whether the use of sulodexide has any effect on the clinical response of patients presenting COVID-19.

### Who can participate?

Adults between 40 - 80 years old, with confirmed COVID-19.

### What does the study involve?

Patients that visit emergency ward or primary care facility with clinical symptoms of COVID-19 will start oral dose of sulodexide.

A follow-up visit will be scheduled via electronic media (home phone, cell phone, computer, video-connect) at 7 day intervals for 21 days, if there is no form of electronic communication, a personal visit will be arranged at the participant home by one of the trial collaborators. Extra follow-up session will be available at a 24hrs phone line for emergencies as needed. If hospital care is needed, a follow-up visit will be arranged every day during the course of the hospital stay by a trial collaborator, not interfering with hospital policies or treatments established. If the treating physician determines the necessity to terminate sulodexide, the practitioners will stop medication.

What are the possible benefits and risks of participating?

Benefits: when infected with COVID-19 the use of sulodexide may reduce the severity of clinical symptoms avoiding the need for hospital admission and/or develop more severe complications.

Risks: only the ones related to the use of the medication, mostly reported gastrointestinal discomfort in some patients. will not interfere with commonly recommend treatment of COVID-19

Where is the study run from?

CLINEDEM (Mexico)

When is the study starting and how long is it expected to run for?

April 2020 to November 2020

Who is funding the study?

Investigator initiated and funded

Who is the main contact?

Dr Alejandro Jose Gonzalez Ochoa, alex8as2@yahoo.com.mx

## Contact information

**Type(s)**

Scientific

**Contact name**

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**Contact details**

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## Additional identifiers

# Study information

## Scientific Title

Sulodexide in the treatment of early stages of COVID-19: A randomised controlled trial

## Acronym

ERSul study

## Study objectives

Use of a medication with endothelium restoration, antiinflammatory and antithrombotic properties can reduce the severity of presentation of in COVID-19 positive patients

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Approved 28/05/2020 Comité de Ética e Investigación Facultad de Medicina Mexicali (Coordinación de posgrado e Investigación, Av Alvaro Obregón y Julián Carrillo s-n Col. Nueva CP 21100; +52 686 551 9497; cei.fm@uabc.edu.mx), ref: none provided

## Primary study design

Interventional

## Study design

Prospective interventional cohort study

## Study type(s)

Treatment

## Health condition(s) or problem(s) studied

COVID-19 (SARS-CoV-2 infection)

## Interventions

Current interventions as of 09/09/2020:

Group A: patients with COVID-19 early symptoms to received mask placebo 500LRU twice a day + standard of care.

Group B: patients with COVID-19 early symptoms to received Sulodexide 500 RLU bid + standard of care

Group A and B will be randomized by computer software allocation program.

For group A participants, general demographic information will be collected and baseline serum levels of d-dimer, C-reactive protein, Creatinine will be taken; a collaborating physician will be followed to the study under physical home or virtual visit (cell, computer, telephone) every 7 days for a period of 21 days as available, making records of any symptomatology referred to by the patient or need to go to the hospital; in case of admission to hospital, information is requested from your treating physician about its evolution until its release, prior authorization by the patient.

#### Previous interventions:

Group A: patients with COVID-19 early symptoms to received placebo + conventional treatment;

Group B: patients with COVID-19 early symptoms to received Sulodexide 250 RLU bid + conventional treatment

Group C: high risk of infection to received sulodexide 250 RLU

Group A and B will be randomized by computer software allocation program, group C will be not randomized. Treatment will last 1 month.

For group A participants, general demographic information will be collected and baseline levels of D-dimer taken; will receive placebo on the same packaging as your original sulodexide, a collaborating physician will be followed to the study under physical home or virtual visit (cell, computer, telephone) every 7 days for a period of 21 days as available, making records of any symptomatology referred to by the patient or need to go to the hospital; in case of admission to hospital, information is requested from your treating physician about its evolution until its release, prior authorization by the patient.

If the patient is assigned group B, he will receive doses of sulodexide taking 250LRU (1 tablet) every 12 hours, basal levels of D-dimmer will be taken, will receive the same follow-up as group A.

If group C is assigned, the participant will receive an oral dose of 250LRU every 12 hours for 21 days, if it remains asymptomatic COVID-19 test at 21 days, if you report negative, the participation in the study will be terminated; in case of initiating suspicious symptomatology, testing for COVID-19 will be performed, if positive, will follow the same protocol of group B in relation to follow-up, if negative, will be terminated its participation in the study.

#### **Intervention Type**

Drug

#### **Phase**

Not Applicable

#### **Drug/device/biological/vaccine name(s)**

Sulodexide

#### **Primary outcome(s)**

Current primary outcome measure as of 09/09/2020:

The Clinical-Therapeutic response will be defined as the need for hospitalization, length of stay in hospital (days), need for oxygen support, length of need for oxygen support (days), and death measured using patient records collected between baseline and 21 days

Previous primary outcome measure:

The Clinical-Therapeutic response will be defined as the need for hospitalization, presence of thromboembolic complications, length of stay in hospital (days), need for use of mechanical ventilation, need for hemodialysis, major haemorrhagic complications, death measured using patient records throughout the study

#### **Key secondary outcome(s)**

Current secondary outcome measures as of 09/09/2020:

1. Serum levels of D dimer, C-reactive protein, and Creatinine measured by a blood test at baseline and 14 days
2. Incidence of a thromboembolic event confirmed by ultrasound or CT between baseline and 21

days

3. Incidence of a major bleeding event between baseline and 21 days

Previous secondary outcome measures:

Levels of D dimer measured by a blood test in an authorized laboratory site. in group A and B, will be measured at the first visit and at the end of the trial (21 days). Group C will be measured only if positive COVID-19 infection

**Completion date**

30/11/2020

## Eligibility

**Key inclusion criteria**

Current participant inclusion criteria as of 09/09/2020:

1. Less than 3 days onset of COVID-19 suspected symptoms
2. Age between 40 - 80 years
3. Body mass index between 18 - 35 kg/m<sup>2</sup>
4. >50% calculated risk for severe clinical progression

Previous participant inclusion criteria:

1. Less than 3 days onset of COVID-19 suspected symptoms
2. Age between 40 - 80 years
3. Body mass index between 18 - 35 kg/m<sup>2</sup>
4. History of DM, hypertension, COPD, or other chronic disease

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

All

**Total final enrolment**

243

**Key exclusion criteria**

Current participant exclusion criteria as of 09/09/2020:

1. COVID-19 negative test.
2. Reluctant to take medication
3. Reluctant to followup
4. Bed confinement

5. Chronic use of steroids
6. History of deep vein thrombosis in the last 6 months
7. Chronic use of anticoagulation
8. Already in hospital care
9. Previous treatment for COVID-19

Previous participant exclusion criteria:

1. COVID-19 negative test.
2. Reluctant to take medication
3. Reluctant to followup
4. Bed confinement
5. Chronic use of steroids
6. History of deep vein thrombosis in the last 6 months
7. Chronic use of anticoagulation

**Date of first enrolment**

15/06/2020

**Date of final enrolment**

06/08/2020

## **Locations**

**Countries of recruitment**

Mexico

**Study participating centre**

**CLINEDEM**

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## **Sponsor information**

**Organisation**

CLINEDEM

## **Funder(s)**

**Funder type**

Other

## Funder Name

Investigator initiated and funded

## Funder Name

alfasigma Mexico

# Results and Publications

## Individual participant data (IPD) sharing plan

All data generated or analysed during this study will be included in the subsequent results publication.

## IPD sharing plan summary

Other

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	07/03/2021	08/03/2021	Yes	No
<a href="#">Basic results</a>		04/12/2020	11/12/2020	No	No