

Headline	Summary's evidence: Use de Ribavirin in people with COVID-19
Identification Code	03262020KC
Applicant Area	COVID-19. Keralty Public health Crisis Committee
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Question:

Is the Administration of Ribavirin effective in the management of COVID-19 patients?

Methodology: A quick systematic review was carried out (Manual quick systematic reviews. Global Institute of clinical excellence. 2019).

Searching Terms: COVID 19, 2019 CoV, SARS-Cov2, Ribavirin.

Study Types: Clinical practice guidelines (CPG), Systematic literature reviews (SLR), meta-analyzes, clinical essays and other primary studies.

Information Sources: Pubmed, Science Direct, Cochrane Library, Clinical Trials.

Background: Ribavirin is a nucleoside antiviral drug, with FDA approved indications for respiratory Syncytial virus infections. It's been evaluated its efficacy and safety in patients with Middle East Respiratory Syndrome (MERS) and SARS. It has been reported in literature that the SARS virus, is the closest strain to the COVID-19 virus. And the National Commission Health in China, suggested its use intravenously due to the lack of treatment for COVID-19 (1), So it is thought that an option could be used for the treatment of this disease. Therefore, a quick systematic review of Ribavirin is performed to identify the available evidence in the management of COVID-19 (2) with patients.

Summary's Evidence:

14 documents were found, Two of them answered the questions of interest. These were molecular coupling studies, both carried out by Elfiky, 2020 (1,3). The first study shows a model for ARN- dependent ARN Polymerase (RdRp) proteins for COVID-19, which allows testing in *silico*. Both studies come across with suggesting the potential efficacy of Ribavirin for the management of the COVID-19 disease because of the COVID-19 RdRp, the sequence identity percentage contrasts with SARS is

90.2%, with MERS it is 56.8%, with OC43 it is 55.1%, with NL63 it is 48.8%, with 229E it is 48.5% and HKU1 strains of HCoV is 48.2%.

Now a days, two randomized clinical trials are being carried out to evaluate the safety and efficacy of drug combinations for COVID-19, one of them include Ribavirin within interventions (NCT04276688) and it is in the process of recruiting participants (4).

Recommendations:

- At this time there is not evidence to support the Ribavirin usage in patients with COVID-19 pneumonia. The findings found are a potential input for pharmacological developments.
- It is necessary to take into account that the available evidence COVID-19 is produced quickly Thus may have changes, therefore, regularly will be updated.

References:

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3. Elfiky, A. A. (2020). Ribavirin, Remdesivir, Sofosbuvir, Galidesivir, and Tenofovir against SARS-CoV-2 RNA dependent RNA polymerase (RdRp): A molecular docking study. Life Sciences. doi: 10.1016/j.lfs.2020.117592
4. ClinicalTrials.gov. [Internet] Available in <https://clinicaltrials.gov/ct2/results?cond=Coronavirus&term=Ribavirin&cntry=&state=&city=&dist=>