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COVID-19 and the “madness” for the Ivermectin

COVID-19 y la “locura” por la ivermectina

The Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) it takes more than 6 months from the first cases in China and this has caused until July 2 10533779 cases with more than half a million deaths worldwide. From the first reported cases, a dizzying race began to find effective drugs against the disease that reduce the morbidity, but especially the mortality in affected patients (1).

One of the first drugs tested was the Chloroquine and its derivative the Hydroxychloroquine. The use of the Hydroxychloroquine could have some clinical basis from a reduced observational research with a reduced number of patients, without a control group and methodologically regular. The author proposed the use of Hydroxychloroquine based on the supposed clinical benefits (2). Although we have already seen that no clinical benefits were found again in better researches such as the clinical trials or the systematic reviews, the use of Hydroxychloroquine against the COVID-19 was somewhat rationally and scientifically based.

In Peru, the conditions were not similar for one of the most widely used drugs and it is even approved by the Peruvian Ministry of Health (MINSA) and by many experts in infectious diseases and other specialties defending its benefits. The history of the use of this drug can be summarized in the following points (3,4,5,6,7):

- Caly's group reported that the viral presence in SARS-Cov-2 infected Vero / hSLAM cells disappeared after 48 hours of exposure to 5 uM of Ivermectin. The authors postulated that the antiviral effects of Ivermectin were caused by the inhibition of the importin receptor (IMP) α / β responsible for the transmission of viral proteins to host cells. The authors concluded that the human studies are necessary to substantiate this in-vitro study. This is what usually happens in research and discovery of new drugs.
- The in-vitro antiviral effect of the Ivermectin is not uncommon since its antiviral effect on many viruses, especially in the DNA type, and less effect against RNA type viruses (such as SARS-Cov-2), is known. But this effect in the majority of cases has only been demonstrated in the laboratory, and this antiviral effect could not be reproduced in cells from infected mice (animal model).
- With this unique preclinical study about the effect of the Ivermectin on SARS-Cov-2, the “madness” of skipping all phases of clinical trials was unleashed to suddenly come to prescribe it massively, which is really bad as a medical practice.
- Another researcher, Schmith, indicated that the IC50% (50% of the inhibitory concentration), that is 2 uM (less than half the concentration that Caly used to make the Ivermectin have that antiviral effect in vitro) was 35 times higher than the IC50% that was reached when administering the approved oral dose of Ivermectin (proposed by the MINSA) of 200 ug / kg.

The Ivermectin is a fairly safe drug at the known dose but does not reach antiviral levels in the blood or lung parenchyma. That is why we urgently need clinical studies that adequately assess the usefulness of Ivermectin in patients with SARS-CoV-2 infection and end the "madness" of skipping all the steps of scientific research.

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