Clinical Immunology & Research

Ivermectin and Herd Immunity in SARS COV2 Pandemic from Local Experience to Broader Possibility

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ABSTRACT

Immunity can be natural or artificial, and each of them –in turn- active or passive. Artificial active immunity is vaccine-induced (possibly long acting). Active natural immunity is that obtained by becoming ill (it is the longest, the most efficient, but also the most risky, if the disease in question is potentially lethal). When at least 70% of the population reaches immunity, we speak of "herd immunity", with which it is assumed that community transmission is reduced to a minimum. We have developed an ivermectin-based treatment for SARS COV2 infection, which has proven to reduce mortality on a 7:1 scale, in moderate and/or critical cases, and to prevent mild cases from progressing to more severe stages –thus staying as out patients- but, in all of them, humoral immunity was achieved in a reasonable amount.

If these procedures were applied on a larger, broader scale, we could achieve herd immunity, without waiting for the vaccines to be developed, and without the hazards their manufacturers haven´t yet disclaimed.

Keywords

Immunity, COVID 19, Resistance.

Description

In late April, 2020, the Authors developed and ivermectin-based treatment for COVID 19 infection [1]. It was duly submitted to the National Library of Medicine (USA), being the first one in the world to include results that were validated by clinicaltrials.gov. Those results showed a reduction of mortality rate from 23,5 % to 3,2 % of all moderate/critical cases admitted at hospital (reduction of 7:1), and no need of admittance of mild cases.

Nowadays, there are 43 trials on ivermectin, distributed worldwide, and with similar outcomes [2]. In July, 2020, we were called to treat an outbreak in a Senior Home, where both Directors had contracted the virus and through them 4 of the 50 inmates had got contagion. From these last ones, an 83-year- old female developed an ischemic stroke and died. All the participants (the remaining 49 inmates, and the 25 members of personnel), were treated according to our medication scheme [3].

Both the sick personnel and the affected inmates healed in less than one week, and no other inmates and/or personnel developed symptoms suspected to be related to COVID infection. 54 days after the outbreak, IgG for SARS COV2 was studied in both groups, and 85 % of all participants showed titers from 5 to 10 times higher than standard. That proved all of them had got in contact with the virus, in an asymptomatic way, but their immune system had been capable of producing antibodies.

In other words, all participants had contracted the infection, without even noticing it, and developed immunity. Further research should be needed in order to find out if this humoral response is long lasting, but –according to traditional evidence- active natural immunity obtained by becoming ill is the longest and the most efficient, if compared to vaccines.

Discussion
What is immunity?

It is resistance to contracting a disease. Immunity can be natural or artificial, and each of them in turn active or passive. Artificial

passive immunity is sera-mediated (short-acting). Artificial active immunity is vaccine-mediated (much longer acting). Passive natural immunity is that transmitted by the mother to the fetus, via umbilical cord (short lasting). Active natural immunity is that obtained by becoming ill (it is the longest, the most efficient, but also the most risky, if the disease in question is potentially lethal). When at least 70% of the population reaches this last form of immunity, we speak of "herd immunity", with which it is assumed that community transmission is reduced to a minimum. It is a "vaccine effect", but one hundred percent natural.

Let's look at two examples: Spain and the United Kingdom. Spain imposed a sui generis quarantine (called an "alarm state"), which did not prevent a large number of deaths, and did not achieve herd immunity (only 10% of the population is immunized) [4]. The United Kingdom is –after the USA and Brazil- the Country that has had the highest mortality in absolute numbers [5].

In relative numbers (number of inhabitants / number of dead and number of infected / number of dead), it exceeds the US by far. And it is not yet certain whether it has achieved herd immunity. If so, that would be a victory, but a pyrrhic one.

The logic would be trying to achieve herd immunity, but suffering as few casualties as possible. How to achieve herd immunity in Argentina (and the rest of the world), and live to see it?

By providing the population with the most effective medicines for their protection, and gradually releasing the quarantine.

Is that sustainable over time? The answer is yes, based both on outcomes and low costs. If vaccines are used, based on serious data, there is still a long way to go. In this last sense, we must differentiate the serious data from the interested parties, or the successful propaganda. If you apply medications that have proven (in a statistically acceptable way) their effectiveness, that are approved by most Health Authorities, that have a very low cost, it is POSSIBLE, even for economies as vulnerable as Argentina´s.

Why do we emphasize costs?
Human life cannot and should not be measured in monetary terms; but sustainability of health policies must.

References

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