

## Cytokine Storm Response to COVID-19 Vaccinations

Esmail Farshi \*

Peace and Health Organization, San Diego, California, USA

\*Corresponding author: Esmail Farshi, Peace and Health Organization, San Diego, California, USA; E-mail: farshi@technologist.com

Received: December 01, 2020; Accepted: December 15, 2020; Published: January 2, 2021

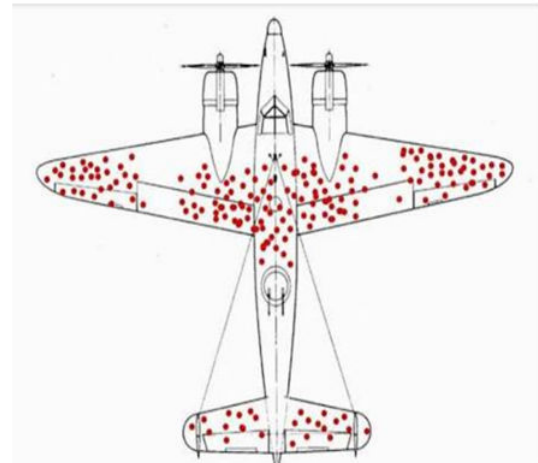
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### Commentary:

Vaccination against SARS-Cov-2 may lead to Cytokine Storm Syndrome in some vaccinated people. We tested vaccination in 33 monkeys and 200 mice and we found vaccinated animals were able to fight off the virus well with resulting a quickly clearing the virus from their lungs except two monkeys and 9 mice. Those two monkeys along 9 mice showed syndrome of cytokine storm in their lungs. This result is extremely important for human vaccination.

The term “cytokine storm” actually recalls the role of the immune system in producing an uncontrolled and generalized inflammatory response [1]. The term cytokine storm was first used in describing the events modulating the onset of the graft-versus-host disease, a condition characterized by an impressively strong activation of the immune system [2]. Taken together, these data clearly indicate that, in SARS-CoV-2 infection, Acute respiratory distress syndrome (ARDS) is the ultimate result of a cytokine storm. In this scenario, the release by immune effector cells of large amounts of pro-inflammatory cytokines (IFN $\alpha$ , IFN $\gamma$ , IL-1 $\beta$ , IL-6, IL-12, IL-18, IL-33, TNF $\alpha$ , TGF $\beta$ ) and chemokines (CXCL10, CXCL8, CXCL9, CCL2, CCL3, CCL5) precipitates and sustains the aberrant systemic inflammatory response [3]. The cytokine storm is readily followed by the immune system “attacking” the body, which in turn will cause ARDS and multiple organ failure, the final result being death, at least in the most severe cases of SARS-CoV-2 infection. First goal in all alternative vaccines for SARS-CoV-2 is boosting immune system as much as possible then most of them even suggest two shots of vaccination for building strong immunization against COVID-19. This may lead a tragedy in vaccinated people by producing cytokine storm. Please note the most deaths resulting COVID-19 is related to cytokine storm that causes Acute Respiratory Distress Syndrome (ARDS). Author estimates any real vaccination may cause a tragedy of cytokine storm in vaccinated people. Therefore, all volunteers vaccinated people who have received different doses should be deliberately infected by real SARS-Cov-2 virus to identify real results of immunity caused by vaccine.

Please see Figure 1. So the story goes that how to armour this plane was a real question the Navy was considering during WWII. The challenge was knowing how to better protect the planes so they didn't get shot down. The planes that got shot down were so badly damaged that any analysis of the wreckage was futile. This phenomenon of excluding the aircraft that had crashed and never made it back is called “survivorship bias.” One may concentrate the armor on the places with the greatest need, where the planes are getting hit the most. But exactly how much more armor belonged on those parts of the plane? That was the answer they came to Engineer Wald for. It wasn't the answer they got. The armor, said Wald, doesn't go where the bullet holes are. It goes where the bullet holes aren't: on the engines.



**Figure 1:** Amour the planes where it is getting shot and you are done right? Wrong. This data wasn't from the planes that got shot down, it was from the planes that made it back. That is critical context. This phenomenon of excluding the aircraft that had crashed and never made it back is called “survivorship bias.”

Vaccine companies usually try to get as much as possible immunity in lung of vaccinated people because the lung is the most critical organ for COVID-19.

But it is wrong because cytokine storm response to vaccination wasn't considered here.

Authors tested a mRNA type of vaccine made for SARS-Cov-2 in 33 African green monkeys together 200 mice.

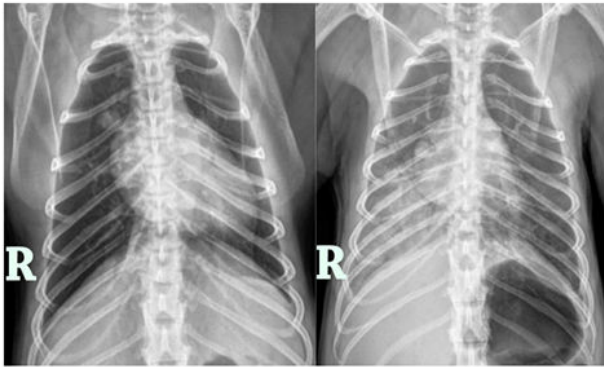
Vaccination caused good immunity against SARS-Cov-2, and vaccinated animals were able to fight off the virus well with resulting a quickly clearing the virus from their lungs except two monkeys and 9 mice.

Those two monkeys along 9 mice showed syndrome of cytokine storm in their lungs. This syndrome was acute in one of monkeys and 4 of mice.

Two of the AGMs showed increased levels of plasma IL-6 compared to baseline. We show only results of monkey because similarly to human.

In Figure 2 shows an IL-6 increase in one of monkeys identification a cytokine storm due to vaccination against SARS-Cov-2.

Figure 3 shows radiographic changes in SARS-CoV-2 infected African Green monkey after vaccination that shows ARDS.

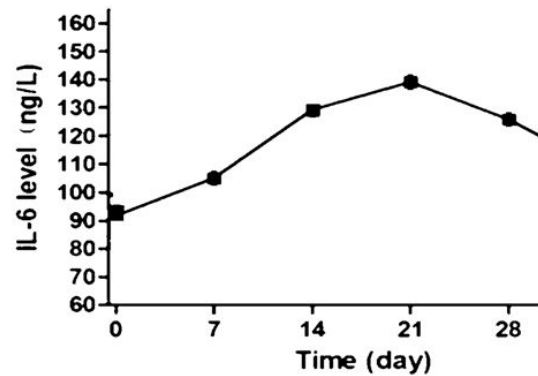


**Figure 2:** Radiographic changes in SARS-CoV-2 infected African Green monkey after vaccination that shows ARDS. Radiographs the day prior (left picture) and at the time of necropsy (right picture) in African Green Monkey showing the rapid development of alveolar lung opacities within the lungs of the animal result of cytokine storm due to vaccination.

Therefore, it is clear using traditional method of vaccination for COVID-19 isn't correct way because different people have different immune response to a vaccine.

It seems developing a smart vaccine for SARS-Cov-2 could be a good solution for syndrome of cytokine storm because such type of smart vaccines may deliver necessary dose to different people together delivering of necessary doses to different organs (for example lung) of a person.

Claiming that 170 different types of SARS-Cov-2 vaccines produce enough or more than enough immunity (specially after second shot of vaccine) sounds terrible without a real test of those vaccines, while all of producers of such vaccines have plan to start public vaccination soon. This may lead a tragedy.



**Figure 3:** Increase of IL-6 in one of monkeys after vaccination that shows cytokine storm.

Please consider even one in thousand people of vaccinated people in the world showing syndrome of cytokine storm will cause 7 million people among 7 billion people then a tragedy of 7 million deaths.

## References

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