ECRONICON OPEN ACCESS

EC PAEDIATRICS
Commentary

Aspect of the Virus Vaccine for Anti-Infective Procedures

Yasuhiro Nagayoshi[1], Daisuke Sakamoto[1], Yuma Katoh[2], Nobuo Yamaguchi[3]* and Shigeru Sakamoto[1]

[1]Department of Cardiovascular Surgery, Kanazawa Medical University, Uchinada, Ishikawa, Japan

[2]Department of Respiratory Medicine, Tokai Central Hospital, Gifu, Japan

[3]Ishikawa Natural Medicinal Products Research Center, Foundation, Fukubatake, Kanazawa, Ishikawa, Japan

***Corresponding Author:** Nobuo Yamaguchi, Professor Emeritus, Ishikawa Natural Medicinal Products Research Center, Foundation, Fukubatake, Kanazawa, Ishikawa, Japan.

Received: December 21, 2020; **Published:** January 20, 2021

Keywords: *Virus Infection; SARS; MARDS; Covid-19; Vaccine; ADE*

Background

A new species of coronavirus has been reported in Wuhan, the biggest city beside Yangtze River. Further pandemics have been spread throughout the world. By the end of 2020, many developed countries will prepare the RNA vaccine for the most important political sense, which hastily skips the important steps. However, today's vaccine candidates are not approved by routine procedures, in particular by their safety and efficacy in a sense for prevention. In addition, the virus vaccine is a unique procedure for the host, especially if you are infected with the appropriate virus. According to the latest WHO report, 74,862,082 people were infected worldwide (December 17, 2020). However, the life-sustaining immunity is usuary directed against the corresponding infectious organism. There are currently no officially approved therapeutics or vaccines against Covid-19. Yet human infectious disease by virus result in specific and serotype multi-reactive antibodies.

General vaccination risk; The general risks of vaccines are that the vaccine itself and the adjuvant are mixed. Thus, the vaccine itself can be selected or artificially attenuated to low-risk material, as well as attenuated substance for detoxification of target materials. The other for adjuvant materials required to support and accelerate the immunological network that induces an antibody and/or T-lymphocytes. The typical substance of the material is nucleotide, polysaccharide from bacteria and also in experimental, oily substances are used for hard digestive material in the lymph fluid.

Particular risk for virus vaccines; In bacteria, vaccine-induced immune factors act as an antibacterial factor for successful host defense. However, the virus vaccine does not support our anti-infectious factor. In the case of SARS, MARS and DEMGV, vaccine reported, twisted and improved the viral infection, through so-called antibody-dependent enhancement, ADE. The most compelling explanation for the increased incidence of severe infant illness and atypical secondary DENV infection is antibody-dependent enhancement (ADE).

The mechanism is mainly FcR-mediated endocytosis by myeloid cells (such as monocytes and macrophages). Through a mechanism that is largely under discussing, antibody-binding virus escapes phagolysosomes and persuade a productive infection within the host cell. In addition, productive DENV infections caused by ADE (compared to traditional routes of entry) have found higher viremia and suppressed the status of antiviral protection in the hosts.

It is one of the most interesting to understand how the immune system interacts not only with pathogens but also with the vaccine itself and is an important insight into developing safe and effective vaccines. In particular, researchers need to understand whether the vaccine causes the same types of immune system such as that have been observed in the past. Since the 1960s, tests of vaccine-candidate for diseases such as dengue, respiratory protection syncytial virus (RSV) and severe acute respiratory syndrome (SARS) have shown a paradoxical phenomenon. Some animals and those exposed to the virus after vaccination developed more serious illness than unvaccinated animals [1]. The immune-primed host appeared to initiate a twisted response to natural infections in certain virus cases.

This immune relapse, or so-called immune enhancement, can manifest itself in several ways, such as antibody-dependent enhancement (ADE), a process in which a virus uses antibodies to support infections or cell-based enhancement, a category that includes allergic inflammation caused by Th2 immunopathology. In some cases, the improvement processes may overlap. There is a scientific discussion about which, if any, of these phenomena - for which exact mechanisms remain unclear and for which the novel coronavirus might be involved and how they could influence the success of vaccine candidates.

Vaccines are designed to enhance the natural immune system in response to invading viruses by detecting antigens, which are unique molecules on the surface of pathogens. Ideally, the immune system responds to the presence of these antigens by producing special immune cells that directly attack the pathogen or by producing proteins called antibodies. Antibodies stick to an antigen and attached immune cells with Fc Receptor, then endocytosed for processing the pathogen.

Although ADE has focused the most attention to date, some researchers pointed that it regulates COVID-19 more than other immunopotentiating pathways, given the known epidemiology of the virus and its behavior in humans. "It's possible ADE, but probably Th2 immunopathology," In previous studies with SARS, older mice were at particularly high risk of life-threatening Th2 immuno-pathology. This finding expresses concern about what this does for the use of the COVID-19 vaccine.

Covit-19 vaccine; The geological spread of this virus was necessary to stop the outbreak of the pandemic in an anti-infectious sense. Moreover, this pandemic had seriously affected economic humanism, even in political circumstances. So many treatments, including vaccine preparation, have been skipped, and the regular developmental step has been skipped. In fact, Covid-19 vaccine without sufficient medical consideration. This Ttempt will be so dubious for success [2-8].

Bibliography

1. Takafumi Takei., *et al*. "Constitution Oriented Regulation for Granulocyte/Lymphocyte Ratio within 24 hrs by Hot-Spring Hydrotherapy". *EC Gynaecology* 8.8 (2019): 744-752.

2. Daisuke Sakamoto., *et al*. "Vaccination is an Effective Way to Prevent Viral Diseases? - Proposal for Oral Adjuvant System". *EC Paediatrics* 9.4 (2020): 94-102.

3. New Anti-Virus Agent-Kumazasa Ingredient -Nobuo Yamaguchi and Tsugiya Murayama". *EC Paediatrics* 9.8 (2020): 177-185.

4. Guzman MG., *et al*. "Dengue: a continuing global threat". *Nature Reviews Microbiology* 8 (2010): S7-16.

5. Chareonsirisuthigul T., *et al*. "Dengue virus (DENV) antibody-dependent enhancement of infection upregulates the production of anti-inflammatory cytokines, but suppresses anti-DENV free radical and proinflammatory cytokine production, in THP-1 cells". *Journal of General Virology* 88 (2007): 365-375.

6. Boonnak K., *et al*. "Cell type specificity and host genetic polymorphisms influence antibody dependent enhancement of dengue virus infection". *Journal of Virology* 85 (2011): 1671-1683.

7. Lin HE., *et al*. "Analysis of epitopes on dengue virus envelope protein recognized by monoclonal antibodies and polyclonal human sera by a high throughput assay". *PLOS Neglected Tropical Diseases* 6 (2012): e1447.

8. Williams KL., *et al*. "Antibodies targeting dengue virus envelope domain III are not required for serotype-specific protection or prevention of enhancement *In vivo"*. *Virology* 429 (2012): 12-20.

Volume 10 Issue 2 Febuary 2021