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Annals of Immunology & Immunotherapy
ISSN: 2691-5782

Comprehensive Insights into ModRNA Vaccines: Persistent PP-Spike Recombinant Protein, Hyperimmune/Inflammatory Reactions, Thrombotic Vasculopathy, Chronic Organ Complications and Excess Deaths

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Mini Review
Volume 6 Issue 1
Received Date: January 08, 2024
Published Date: January 23, 2024
DOI: 10.23880/aii-16000181

Abstract

A recent study revealed a persistent presence of the PP-Spike recombinant protein in 50% of individuals who received ModRNA injections, contrasting with unvaccinated controls, whether SARSCoV-2 infected or not, up to 187 days post-injection. The implications of these findings are discussed in the context of PP-Spike recombinant protein-induced hyperimmune/inflammatory reactions and thrombotic vasculitis as mechanisms to elucidate the serious side effects, long-term organ complications, and excess deaths observed after administering Covid ModRNA products. These results underscore the urgent need for a comprehensive reassessment of the risk-benefit profile of ModRNA injections, including an immediate halt in their use for any person, and a renewed emphasis on understanding and addressing their long-term effects on human health.

Keywords: ModRNA Vaccines; PP-Spike Recombinant Protein; Persistent Circulation of PP-Spike Protein; Spike-induced Thrombotic Vasculopathy

Abbreviations: ACE2: Angiotensin-Converting Enzyme 2.

Introduction

The SARS-CoV-2 coronavirus is responsible for the respiratory disease COVID-19, which has led to the ongoing global pandemic. Throughout the pandemic, researchers worldwide have dedicated years to studying this virus, aiming to comprehend its mechanism of action [1-11]. The RNA genome of SARS-CoV-2 comprises approximately 30,000 nucleotides, housing 11 major coding genes. Structurally, SARS-CoV-2 is characterized by numerous glycosylated Spike (S) proteins covering its surface, aiding in binding to the angiotensin-converting enzyme 2 (ACE2) receptor on host cells, thus facilitating viral entry [12].

The Spike (S) protein, one of SARS-CoV-2's main proteins, plays a crucial role in recognizing the host cell receptor and facilitating entry [13]. It consists of the distal S1 subunit for recognition and the proximal S2 subunit essential for fusion with the host cell membrane [13]. During the development of the widely used ModRNA-based vaccines, Pfizer-BioNTech (BNT162b2-Comirnaty) and Moderna (mRNA-1273), all uridine nucleobases were substituted with methyl pseudouridine (m1Ψ), a less immunogenic [14] but more stable alternative [15]. Simultaneously, mutations were introduced within the 4284 nucleotides comprising

the Spike protein, specifically at positions K986P and V987P, aiming to stabilize the protein in a prefusion form, thereby stimulating enhanced antibody production in humans [15].

The S protein of SARS-CoV-2 is highly conserved among all human coronaviruses (HCoVs) and plays a vital role in receptor recognition, viral binding, and host cell entry. Consequently, it represents a crucial target for scientists developing vaccines and therapeutic approaches against COVID-19. Both Pfizer and Moderna products consist of a recombinant ModRNA vaccine encoding a Spike protein of SARS-CoV-2. Despite differences in the mRNAs, they both encode the same recombinant Spike protein (referred to as PP-Spike). This protein differs from the natural wt-Spike protein produced by the SARSCoV-2 virus due to a double amino acid change at positions 986 and 987 (K986P and V987P) [16,17]. This alteration stabilizes the Spike conformation in an inactive prefusion state.

The introduced double amino acid variation eliminates a tryptic digestion site, enabling the specific detection of recombinant PP-Spike proteins in biological fluids through tryptic digestion [18] followed by mass spectrometry analysis [19-22]. Brogna and colleagues [23] present a methodological approach in their work to detect specifically the presence of recombinant PP-Spike in various biological fluids of human and animal organisms, including blood, urine, saliva, and bronchoalveolar lavage fluids.

The Significance of the Study of Brogna and Collaborators.

While the COVID-19 pandemic inflicted a global crisis, it also prompted numerous scientists to develop innovative solutions against viruses. Among these, ModRNA vaccines, owing to their production versatility, could potentially establish a new standard for vaccinations. However, scientists bear the responsibility of not overlooking controls. The critical importance lies in monitoring the recombinant protein "PP-Spike" induced by the ModRNA vaccine over time in human biological samples. The presented method of Brogna and collaborators [23] allows for assessing the half-life of the PP-Spike protein molecule, guiding decisions regarding the potential risks or benefits of administering additional booster doses of the SARS-CoV-2 ModRNA vaccine.

The study group, hailing from southern Italy, comprised 40 subjects. Of these, 20 received the full ModRNA vaccine cycle starting in April 2022, all belonging to the health sector. Another 20 were unvaccinated, with negative results for COVID-19 nasopharyngeal PCR tests and no detectable antibody titers. An additional 20 unvaccinated individuals who tested positive for COVID-19 were included. The specific PP-Spike fragment was detected in 50% of the analyzed biological samples. This presence remained irrespective of the IgG antibody titers against SARS-CoV-2, with a geometric mean of 629.86 BAU/mL . The minimum detection time for recombinant PP-Spike was 69 days post-vaccination, while the maximum was 187 days. All controls (samples from unvaccinated individuals) yielded negative results. The control group (20 unvaccinated individuals) also tested negative for recombinant PP-Spike after contracting COVID-19.

Prior studies noted the immediate presence of the Spike protein from the ModRNA vaccine post-injection [24]. According to Pfizer's version; ModRNA nanoparticles should be taken up by immune cells in the lymph nodes and be expressed during 5-7 days after muscle injection. However, other authors isolated vaccine ModRNA sequences from peripheral plasma 28 days post-injection [25]. The work of Brogna and colleagues [23], surpasses mere cognitive exploration, providing a method not only to confirm the persistence of the ModRNA vaccine but also to quantify the product the protein intended to induce antibody production. This verification helps ascertain the correct half-life and potential vaccine status updates. Through mass spectrometry examination, the researchers identified specific fragments of the recombinant Spike protein (PP-Spike) in approximately 50% of ModRNA-vaccinated subjects. In some instances, the PP-Spike specific marker persisted in vaccinated individuals for more than 187 days, suggesting the ability to detect the recombinant "PP-Spike" protein long after vaccination, even within organic tissues. In conclusion, the capability to detect specific fragments of the recombinant Spike protein presents new avenues for monitoring the presence and half-life of the PP-Spike protein in individuals who have received ModRNA injections.

Implications

As of today, it is evident that Pfizer and Moderna's ModRNA injections do not confer immunity against SARSCoV-2 infection, reinfection, or viral transmission. Furthermore, recent efforts have yielded compelling real-world data indicating that ModRNA injections can induce a spectrum of side effects, ranging from mild to severe, and in some cases, even leading to fatalities. The severity of these reactions may be influenced by the unique genetic makeup of individuals, dictating their immune responses to foreign agents within their bodies [26,27].

ModRNA injections have been linked to an increase in excess deaths observed in various countries from 2020 to 2023, following the administration of these products to the general population [28,29]. A crucial public health concern associated with COVID-19 and ModRNA vaccines is the emergence of chronic multi-organ complications in affected

individuals [27].

The flawed design of ModRNA, particularly in Pfizer's ModRNA Covid-19 vaccine, raises concerns about increased risks of autoimmunity due to defective RNA reading frames [30,31]. This highlights a critical aspect of the ongoing debate surrounding the safety and efficacy of ModRNA vaccines. The significance of the study by Brogna and collaborators [23], demonstrating the presence of the PP-Spike recombinant protein in the blood of 50% of ModRNA-injected individuals(r) and in tissues [32] for extended periods, becomes paramount and simultaneously disastrous for two compelling reasons:

- Irreversible Presence of recombinant PP-Spike: Presently, there is no scientifically established method to reduce or eliminate the PP-Spike recombinant protein from the body.
- Mechanism of Damage: ModRNA injections, and to a much lesser extent, severe infections by the virus itself, trigger thrombotic Vasculopathy coupled with a substantial immuno/inflammatory response induced by the PP-recombinant Spike protein [26,27]. The research findings indicating the persistence of PP-Spike in blood circulation and various organs for prolonged duration's post-ModRNA injection underscore the potential long-term exposure to this immuno/inflammatory and thrombotic vasculitis, resulting in chronic organ damage in a considerable number of individuals. This poses a significant public health challenge, demanding urgent attention and comprehensive investigation. The implications of these findings underscore the urgent need for a thorough reevaluation of the risk-benefit profile of ModRNA injections (including the immediate halt of their use in any person) and a renewed focus on understanding and addressing their long-term effects on human health.

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