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Imaging Diagnosis of and Treatment for Spike Protein-Induced Thrombosis after COVID-19 mRNA Vaccination

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ABSTRACT

Thrombosis is one of the adverse effects of COVID-19 mRNA vaccination. A 60-year-old man suffered from brain fog, a common neurological symptom, for more than 3 months after the 4th booster injection of the COVID-19 mRNA vaccine. MRA analysis revealed filamentous thrombi in the right and left internal carotid arteries. A spike protein detox protocol with Phyto-PROTEOLYSE™, PROTISS-C™, CurCum-Zyme™, and aspirin was applied. At the clinical follow-up, his D-dimer level indicated that the spike protein detox protocol resulted in the successful degradation of spike thrombi in his internal carotid arteries, thus relieving his brain fog. MRA analysis also revealed the resolution of the spike thrombus, demonstrating that the spike-detox protocol is a clinically relevant approach for treating the long-term adverse effects of COVID-19 mRNA vaccination.

Keywords: COVID-19, mRNA Vaccine, Spike Thrombosis, Proteolysis.

INTRODUCTION

Owing to the COVID-19 pandemic, the COVID-19 vaccine was developed at an unprecedented speed and deployed on a global scale [1]. Several vaccines, including mRNA-1273/CX-024414 (Moderna) and BNT162b2 (Pfizer), have been approved for use in multiple countries and confirmed to reduce the number of COVID-19 infections, transmissions, hospitalizations and deaths in randomized controlled trials [1,2]. However, the safety and efficacy of booster or regular COVID-19 mRNA vaccination programs are still undefined [3-5]. Furthermore, various adverse neurological reactions, such as subarachnoid hemorrhage, hemorrhagic stroke, Guillain–Barré syndrome, Bell's palsy, and demyelinating disorders, have been reported [6-8]. In October 2024, health administrations in Japan advocated for the routinization of regular COVID-19 vaccination programs despite official reports of several notable adverse reactions, such as, including anaphylactic shock, vaccine-induced death, and various cardiovascular and immunological disorders. Moreover, these adverse reactions often present well after the COVID-19 mRNA vaccination and progress to chronic diseases [9]. However, the diagnosis and treatment of long-term adverse reactions to COVID-19 mRNA vaccination have not been established. In this case report, we diagnosed spike thrombi on the basis of findings on an MRA scan and present an effective spike detox program using proteolytic enzymes. In this paper, we present a clinically

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relevant approach for treating chronic adverse reactions after COVID-19 mRNA vaccination.

METHOD

MRA analysis

3D MRA images were constructed from 1.1 mm horizontal slices of neck and head MRI DICOM image data using Expert INTAGE software (CYBERNET SYSTEMS, CO., LTD, https://www.cybernet.co.jp). Endoscopic views in silico were made using the virtual endoscopic program included in Expert INTAGE, with the camera positioned inside the artery.

Spike protein detox protocol

The spike protein detox protocol was as follows: Phyto-PROTEOLYSE™ 1 capsule, PROTISS-C™ 1 capsule, and CurCum-Zyme™ 1 capsule, 3 times per day. Phyto-PROTEOLYSE™, PROTISS-C™, and CurCum-Zyme™ were purchased from Phytomedic Labs (http://www.phytomediclabs.net), Houston, TX77082, USA. Phyto-PROTEOLYSE™ contains protease blends with nattokinase, lumbrokinae, serratiopeptidase, fungal proteases, bromelain, and papain. Phyto-PROTEOLYSE™ also contains CoRiPhyl™, which is a mixture of CoQ10, rutin, ribose, alpha-lipoic acid, and phytosterols. PROTISS-C™ contains a proteolytic enzyme blend with proteases, bromelain, papain, and Boswellia with lipoic acid. The PROTISS-C™ also contains CoRiPhyl™ neem, cuscuta, turmeric, rosehip, and grapeseed. CurCum-Zyme™ contains an enzyme blend with proteases, amylase, phytase, cellulase, and lipase, and turmeric with moringa, broccoli, quercetin, Boswellia, black cumin, resveratrol, baobab fruit extract, green tea, vitamin D3, astragalus, and CoRiPhyl™. The spike protein detox protocol also includes 100 mg of aspirin per day.

CASE PRESENTATION

A 60-year-old office worker from downtown Tokyo visited Ochanomizu Health & Longevity Clinic on September 3, 2022, with a chief complaint of brain fog. The Mini-Mental State Examination (MMSE) indicated normal cognitive function (MMSE 29/30) with well-preserved language comprehension, memory function, and executive function and well-preserved orientations with time and place. The patient's medical history revealed a diagnosis of autonomic ataxia at 33 years old, fundus hemorrhage in the left eye at 60 years old, and inguinal hernias at 33 and 55 years old.

The patient received the COVID-19 mRNA vaccine (BNT162b2, Pfizer) 4 times—in March 2021, April 2021, September 2021, and June 2022—without any severe adverse reactions (Figure 1). T1 and T2 sequences on brain MRI conducted on September 6, 2022, revealed no significant findings; however, MRA revealed long filamentous thrombi in the right and left internal carotid arteries at the C1 to C2 level (Figure 2A and 2B). Endoscopic images revealed that the filamentous thrombus was localized inside the artery and attached to the endothelial cells of the artery (Figure 2C, 2D). Blood chemistry revealed elevated D-dimer (1.32 μg/mL) and normal FDP (2.8 μg/mL) levels on September 3, 2022 (Figure 1). The patient was tentatively diagnosed with arterial thrombosis in the right and left internal carotid arteries on the basis of neurological symptoms and MRA findings. To improve brain fog, the spike protein detox protocol was clinically applied from September 3, 2022, to April 17, 2023, as shown in Figure 1. During detox treatment, the serum D-dimer peaked at 6.2 μg/mL and the FDP peaked at 6.9 μg/mL on February 21, 2023; however, the serum D-dimer level gradually decreased but remained at approximately 1.2 μg/mL after termination of the detox protocol (Figure 1). The spike protein detox protocol was specifically designed by Dr. Mamadou from Phytomedic Labs (http://www.phytomediclabs.net) to degrade the COVID-19 spike protein by using a mixture of various proteases that were extracted from plants and herbs as described in the Methods section. Three months after the spike-detox protocol, the patient underwent repeat MRA on November 15, 2022, which revealed that the thrombi had decreased in size and was protruding into the lumen but was still attached to both internal carotid arteries (Figure 3). In October 2023, the patient trekked the mountain to the Everest View Hotel located at an altitude of 3880 meters. After descending the mountain, the patient's serum D-dimer level increased to 1.94 μg/mL, so the spike detox protocol was subsequently reinitiated from December 5, 2023, to February 20, 2024 (Figure 1). A third MRA performed on February 20, 2024, revealed that the thrombi were no longer present in the internal carotid arteries (Figure 4C, 4D) and that a filamentous fiber-like thrombus was now present inside the left internal carotid artery (Figure 4B), which was not detected endoscopically (Figure 4D). After treatment, the patient's brain fog disappeared, and he underwent medical follow-up at the Ochanomizu Health & Longevity Clinic, at which time his D-dimer levels were between 1.2 and 1.6 μg/mL. Since 2021, at the Ochanomizu Health & Longevity clinic, more than 40 patients suffering from neurological adverse reactions after the injection of COVID-19 mRNA vaccine were treated by the spike protein detox protocol with a successful improvement in neurological symptoms.

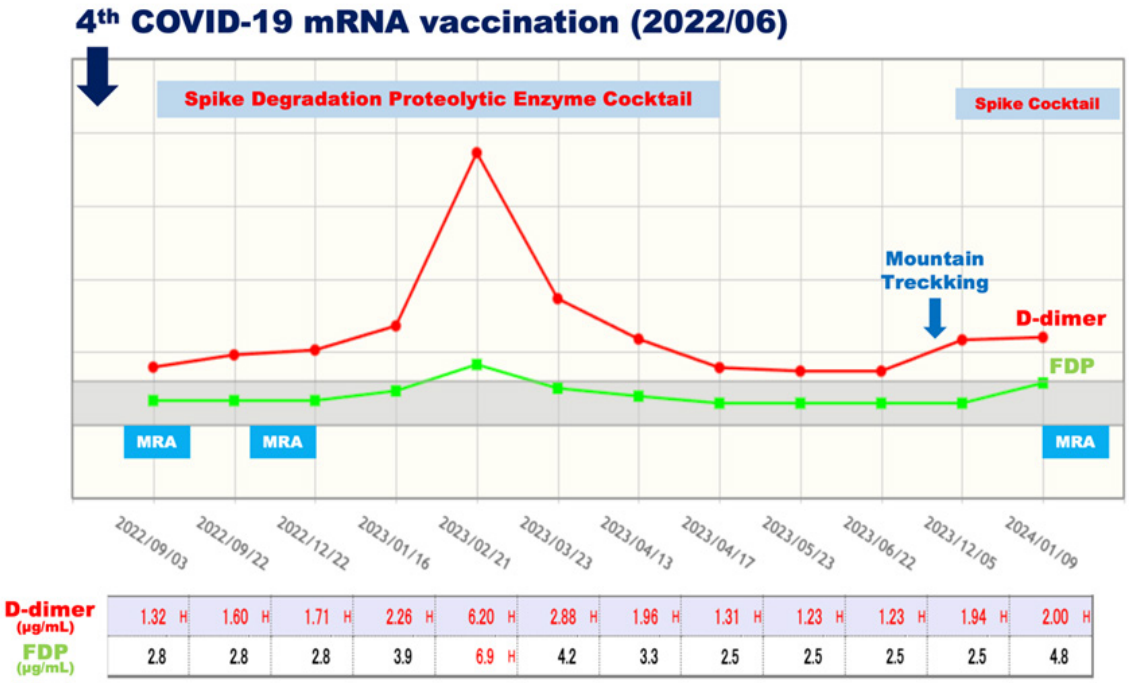

Figure 1. Clinical chart of the patient illustrating the fluctuation of serum D-dimer and FDP levels with the treatment by spike protein detox protocol.

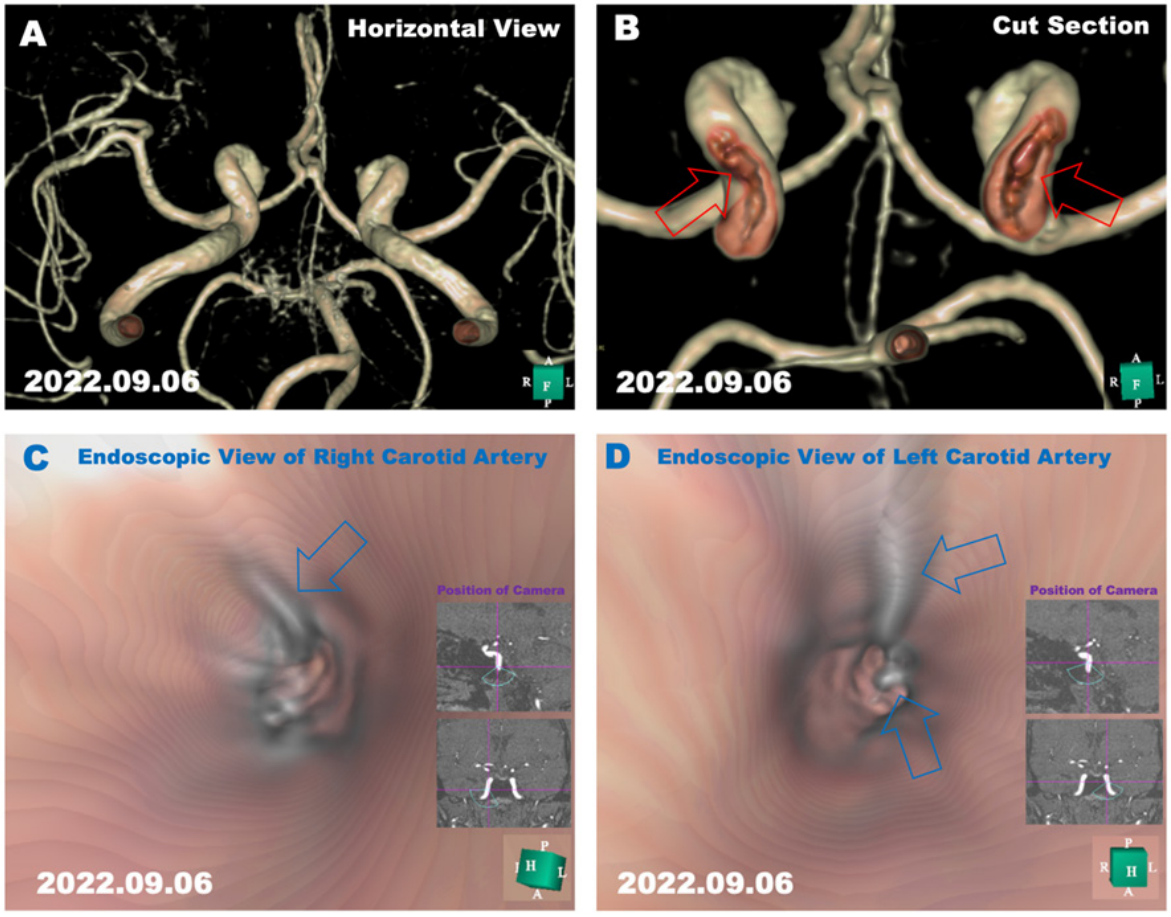

Figure 2. MRA on a horizontal view (A), spike protein-induced thrombosis observed in a cut section of internal carotid arteries (indicated by red arrows) (B), and endoscopic in *silico* views of spike thrombosis inside of the right and left carotid arteries (indicated by blue arrows) (C and D), recorded on September 6, 2022.

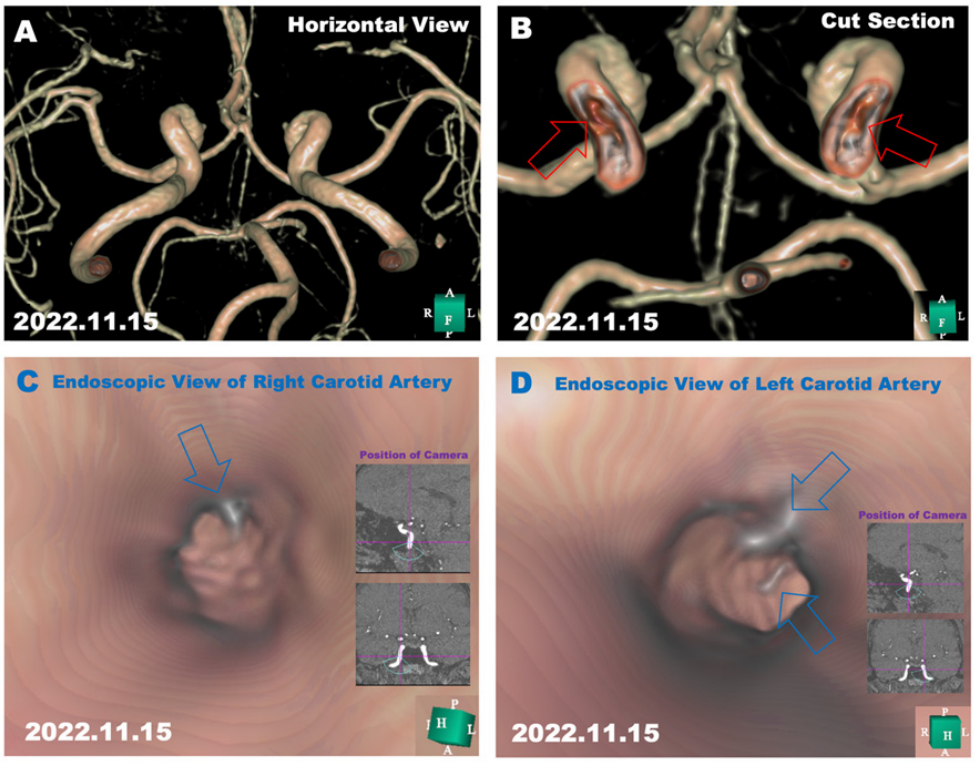

Figure 3. MRA on a horizontal view (A), spike protein-induced thrombosis deceased in size in a cut section of internal carotid arteries (indicated by red arrows) (B), and endoscopic in *silico* views of spike thrombosis inside of the right and left carotid arteries (indicated by blue arrows) (C and D), recorded on November 15, 2022.

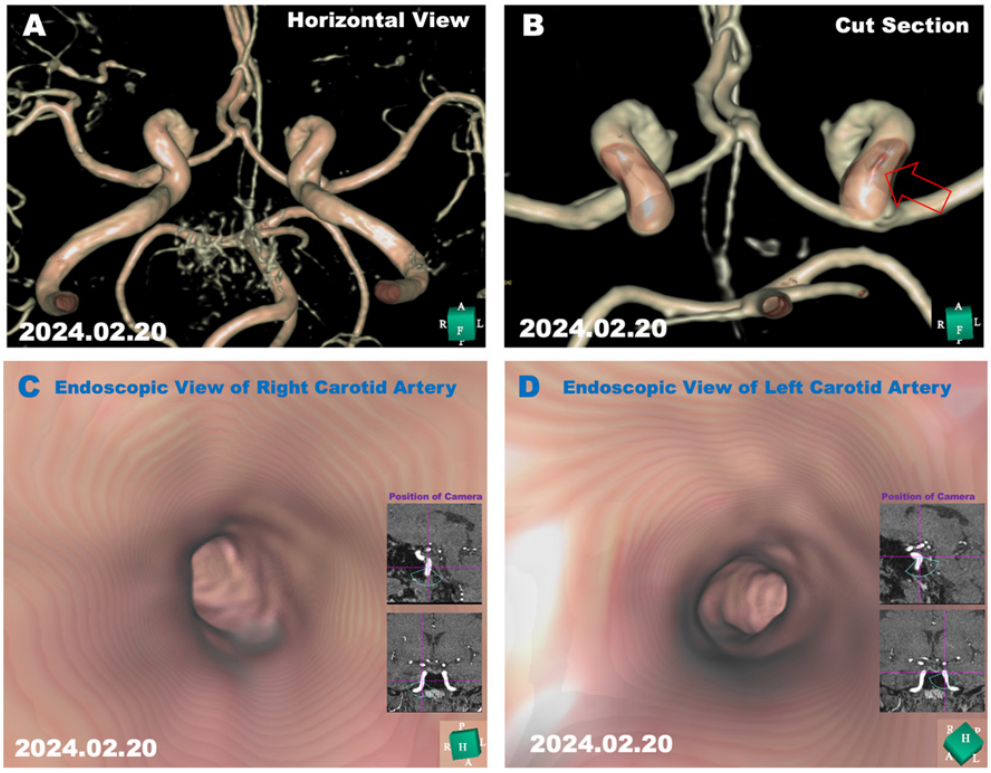

Figure 4. MRA on a horizontal view (A), spike protein-induced thrombosis disappeared in a cut section of right internal carotid artery while a thin filamentous thrombus was observed in left internal carotid artery (indicated by red arrows) (B), and endoscopic in *silico* views showed no thrombosis inside of the right (C) and left (D) carotid arteries, recorded on February 20, 2024.

DISCUSSION

Pathogenesis of spike thrombi

The COVID-19 pandemic has affected people worldwide for more than 2 years. Since December 2020, most countries have routinely administered the COVID-19 mRNA vaccine, which is encoded with spike proteins from the COVID-19 virus [10]. However, various adverse effects have been reported following vaccination, some possibly related to the proinflammatory action of the lipid nanoparticles as well as the proinflammatory effects of the produced spike protein in human tissues or organs [11]. Since the spike protein binds the ACE2 receptor expressed in endothelial cells of arteries and veins as well as myocytes, it is reasonable to speculate that the spike protein induces acute myocarditis, subarachnoid hemorrhage, brain hemorrhage, and other vascular disorders, all of which are considered acute adverse reactions after COVID-19 mRNA vaccination [11]. However, in this case study, the patient suffered from brain fog, a common neurological symptom, for more than 3 months after the 4th booster dose of the COVID-19 mRNA vaccine; thus, the spike protein in this mRNA vaccine might have been reverse-transcribed and integrated into genomic DNA by LINE-1 reverse transcriptase, as suggested by Jaenisch [12], and in CD16+ macrophages, as proposed by Seneff [9] (Figure 5). Seneff's hypothesis also suggests that CD16+ macrophages secrete exosomes containing spike proteins when CD16+ macrophages are activated by stress or inflammation (Figure 5). This hypothesis supports the possibility that mountain trekking at high altitudes activated CD16+ macrophages to secrete spike proteins, thereby addressing the formulation of another thrombus (Figure 1). Passariello et al. reported that the platelet factor 4 (PF4) proteins secreted from activated platelets and spike-RBD proteins can bind to each other [13], suggesting that the interaction of these two proteins could be involved in the generation of spike and PF4 complexes (Figure 6), which could lead to platelet aggregation with the spike protein attached to ACE2 on endothelial cells, as shown in Figure 6 [13]. This hypothesis corroborates the morphological development of filamentous spike protein-related thrombi that were attached to the arterial wall, as shown in Figure 2C, 2D, 3C, 3D, 4B, and Figure 6.

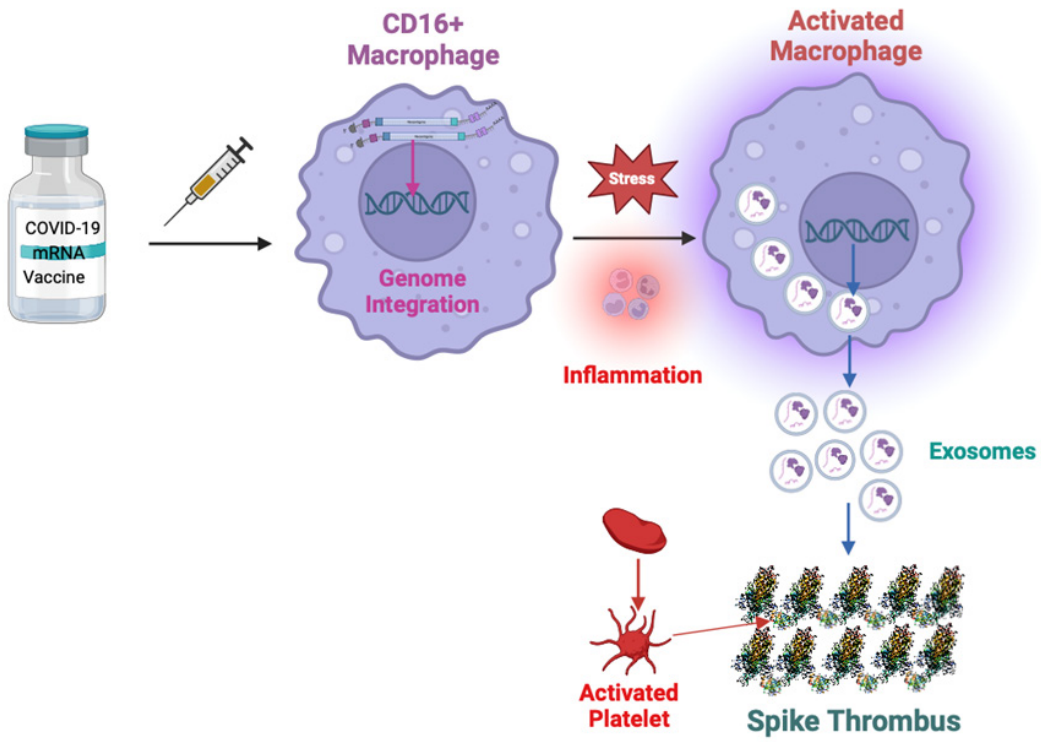

Figure 5. COVID-19 mRNA vaccines are composed of spike proteins and lipid nanoparticles encoded in the mRNA of the COVID-19 virus. After the vaccine was injected into muscle tissue, lipid nanoparticles containing spike protein mRNA were distributed to various tissues and organs. The nanoparticles are transfected into macrophages in the spleen, where mRNA is integrated into DNA by LINE1-mediated reverse transcriptase [12]. When stress and inflammation activate macrophages, the macrophages migrate to the sites of inflammation and secrete exosomes containing the spike protein [12]. Spike proteins and PF4 protein aggregate into complexes, are then secreted by activated platelets and potentially propagate to generate thrombi in arteries and veins [13].

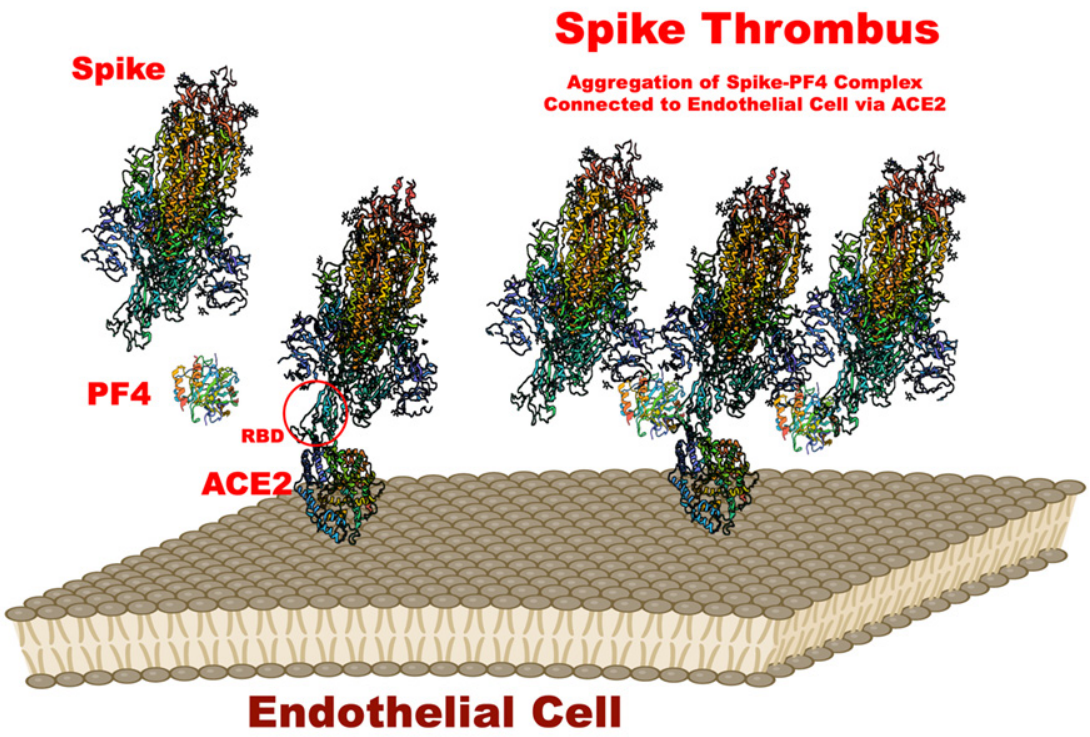

Figure 6. The RBD of the spike protein from COVID-19 (PDB, 6VXX) can bind the PF4 protein (PDB, 1F9Q) secreted from activated platelets [13]. The RBD of the spike protein also binds to the ACE2 receptor (PDB, 7VXM) in endothelial cells. The molecular structure of the spike protein is a trimer of spike peptides, in which one spike molecule has three RBD domains that can bind either PF4 or ACE2. Spike and PF4 proteins can aggregate and form filamentous thrombi that become attached to endothelial cells via the ACE2 receptor in the outer membrane of endothelial cells.

Moreover, analyzing the internal structure on 3D MRA images is critical for the diagnosis of spike-protein induced thrombosis. In addition, endoscopy is a very powerful tool for the diagnosis and morphological examination of spike protein-induced thrombosis as well as its differential diagnosis from ordinary thrombosis. Thrombi that form as a result of the presence of spike proteins are filamentous and attached to the arterial wall, whereas ordinary thrombi appear to have an irregular surface and are more tightly adhered to the arterial wall. The Ochanomizu Health & Longevity Clinic provides 3D MRA analysis for all visiting patients; however, notably, we had no experience in treating a patient with filamentous thrombi before the start of the COVID-19 pandemic in 2020. Furthermore, as diagnosed on the basis of findings on 3D MRA images, spike protein-inducing thrombosis is correlated with high serum D-dimer levels and in turn the presence of fibrin.

A spike protein detox cocktail is a mixture of proteolytic enzymes that cause the degradation of spike proteins so that aspirin or ordinary anticoagulants cannot resolve spike protein-induced thrombosis. Because spike proteins, PF4, fibrin, and other proteins are involved in the generation of filamentous thrombi, a detox protocol that includes various proteolytic enzymes that cause the degradation of spike proteins is necessary to ensure that subsequent treatment leads to the effective resolution of spike protein-induced thrombosis. Moreover, some patients have died suddenly in the bathtub after receiving the first dose of the COVID-19 mRNA vaccine, suggesting that higher temperatures may induce the aggregation of spike protein and PF4 complexes. It is reasonable to speculate that the potential of occlusion of both internal carotid arteries may result in sudden death after COVID-19 mRNA vaccination. There are reports of athletes dying suddenly on the field and television announcers dying suddenly in the studio, likely due to stress, as stress is one of the triggers that can activate CD16+ macrophages to secrete spike proteins at inflammatory sites. To test this hypothesis on spike protein-induced thrombosis, further studies are needed to clarify the pathophysiology of spike protein-induced thrombosis following COVID-19 vaccination.

CONCLUSIONS

Thrombosis is one of the adverse effects of COVID-19 mRNA vaccination. The spike protein detox protocol with Phyto-PROTEOLYSE™, PROTISS-C™, CurCum-Zyme™, and aspirin was clinically applied to a 60-year-old Japanese man with brain fog, a common neurological symptom. At the clinical follow-up, the patient's D-dimer level and findings on MRA images suggested that the spike protein detox protocol may have contributed to the successful degradation of spike protein-induced thrombi in internal carotid arteries, which relieved his brain fog. The spike protein detox protocol that was specifically designed for the degradation of spike proteins presented in this case study is a potentially clinically relevant approach for the treatment of long-lasting adverse effects of COVID-19 mRNA vaccination.

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INFORMED CONSENT

Written informed consent was obtained from the patient.

CONFLICT OF INTEREST

The author declares that there are no conflicts of interest.

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