ISSN 2475-5451

Case Report

International Journal of Diabetes & Metabolic Disorders

Case of Covid Mrna Vaccine Linked Antiphospholipid Syndrome

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Submitted: 21 Apr 2022; **Accepted**: 27 Apr 2022; **Published**: 04 May 2022

Citation: *E.J. Balbona M.D. (2022). Case of Covid Mrna Vaccine Linked Antiphospholipid Syndrome. Int J Diabetes Metab Disord, 7(1), 48.*

There have been several reports of thrombotic adverse events after administration of the mRNA COVID vaccine [1] [2]. The onset of autoimmune disease has also been reported following viral illness as well as following vaccination [3]. The antiphospholipid syndrome is an autoimmune hypercoagulable state that can result in thrombotic events such as deep venous thrombosis, pulmonary embolus, and stroke [4]. The antiphospholipid syndrome has also been reported following natural Covid infection [5]. Herein we present a case of "antiphospholipid syndrome" following COVID mRNA vaccination and associated with life threatening thrombosis.

A 22-year-old male in otherwise excellent health is recommended a Covid vaccination. Subsequently, he suffers a large pulmonary embolus requiring hospitalization. He has no history of trauma, immobility, or medical risk factors for venous thrombosis. He is also on no culprit medications, has no history of drug use and no family history of hypercoagulability. The antiphospholipid antibody: anti-cardiolipin IgG is found to be greater than ten times that of normal. The anticardiolipin antibody level being greater than 150 gpl, normal being less than 14 gpl. Per guidelines these values are repeated and remain markedly elevated (greater than 150 gpl), thus confirming the "antiphospholipid syndrome." His anti-cardiolipin IgM antibodies are noted to also be elevated supporting the recent development of these antiphospholipid antibodies. Notably his Covid nucleocapsid antibodies are negative for prior natural COVID infection or exposure [6].

The repeatedly positive anti phospholipid antibodies confirm the hypercoagulable syndrome. The findings suggest a possible autoimmune reaction to the COVID mRNA vaccine. Autoimmune and complement abnormalities have previously been reported after mRNA vaccination [7]. This may have implications for the many new medications currently being designed to be delivered by similar means. The case suggests the induction of an autoimmune disorder that can result in thrombophilia as well as a possible mechanism for thrombotic complications following exposure to mRNA therapies. This should inform our risk benefit assessment of mRNA therapies in the future.

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