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ARTICLE

CORONAVIRUS-2019 PANDEMIC, CURRENT METHODS OF DIAGNOSIS, TREATMENTS AND ENGINEERING OF THE SAFE AND EFFECTIVE MODERN VACCINES - AN OVERVIEW

MRINAL KANTI DEWANJEE*

Following the Coronavirus-2019/SARS-COV-2 attack on the front-line of epithelial cells of alveoli, the neurons in the olfactory bulb, intestinal lining and endothelial lining of blood vessels after inhalation, all organs supported by the circulatory system are affected simultaneously. Dr. Avindra Nath at NINDS identified the swelling of olfactory bulb by MRI in the acute phase resulting in multi-system organ failure. We have access to a few drugs for viral elimination like specific monoclonal antibody made by Regeneron and Lilly, anti-inflammatory drug, corticosteroids, Dexamethasone and anti-viral drug Remdesivir. The blood-thinners, heparin, low molecular weight heparin fragments and anti-platelet medication saved many lives from micro- and macro-clots and pulmonary embolism. Best approach is to avoid viral exposure before the arrival of safe and effective new generations of vaccines. In this brief review, an attempt has been made to explain the mechanism of viral entry via the ACE2 receptor and the modes of multiple interventions for both diagnosis and therapy and in rare occasions, a lung transplantation. My lifetime investigations on the diagnosis of heart muscle damage, and the mechanism of arterial thrombosis and drug development in cardiovascular diseases assisted me in identifying one of the major aspects of the blood clots, thrombi and emboli in the COVID-19 patients.