



COVID-19 Vaccine-Induced Cardiac Complications: Understanding the Reality of the Alarming Conditions

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INTRODUCTION

Recently, I have been bombarded with inquiries from patients and friends who claim that the COVID-19 vaccine increases the risk of heart attacks. It has forced me to try and understand what these people were talking about, but as the days went by, it became clear that something quite alarming is going on. The entire purpose of vaccination is to encourage immune system to produce antibodies against COVID-19, but the common man is well aware through newspapers, digital content, health bulletins, and other literature that the COVID-19 vaccine caused everything from minor adverse reactions like redness and pain at the injection site to numerous life-threatening adverse reactions like stroke, myalgia or arthralgia, motor and sensory deficits, movement disorders, thrombosis with thrombocytopenia syndrome, ataxia, vasculitis, Guillain-Barre syndrome, inflammatory myopathies, autoimmune hepatitis, thyroiditis, myocarditis, seizures, and Grave's disease. Report from Centers for Disease Control and Prevention (CDC) have highlighted prevalence of thyroid myopathy, myositis, myositis, pneumonitis, dermatomyositis, myopericarditis, fasciitis, rhabdomyolysis, cellulitis, etc. where the vaccine excipients induce the release of myotoxic cytokines, including tumour necrosis factor.

After receiving the mRNA COVID-19 vaccine (mC-19V), studies have revealed an increased risk of thrombosis and an increase in the incidence of acute myocardial infarction (AMI) and ischemic stroke. Along with inflammatory diseases, a few uncommon occurrences of Takotsubo cardiomyopathy, MI, MI with non-obstructive coronary arteries, and isolated tachycardia have also been documented after receiving the mC-19V vaccine. Due to frequent and severe vaccine-

induced thrombotic thrombocytopenia (VITT) blood clotting events after the first dosage, the Vaxzevria (AstraZeneca) vaccination program has been discontinued for first doses during the study.

An inflammation of the heart muscle is known as myocarditis. When the body's immune system responds to an infection or another stimulus, it occurs. Some recipients of the vaccination have developed myocarditis. The majority of these individuals experienced symptoms within a few days after receiving the second dosage of the vaccination. A few teenagers and young adults who received the COVID-19 vaccination suffered minor episodes of myocarditis in the clinical trials examining the COVID vaccine in people between the ages 12-17. There were almost 3,000 kids aged 5 to 11 who participated in the clinical trials, and there were no myocarditis cases reported. For every million second doses of the Pfizer vaccine administered, there were only 29 incidences of suspected myocarditis or pericarditis in the highest-risk age range of 18 to 29. Following a Pfizer booster, the risk is significantly reduced, with only 16 instances per million persons in this age range. For every million second doses of Moderna given to this age range, there were 70 occurrences of probable myocarditis or pericarditis. With just 19 reports per million boosters delivered, the danger following a booster is far lower than with the Pfizer vaccine. Although further study is being done on the long-term consequences, serious incidences of myocarditis following the immunization have been incredibly rare up to this point.

Overall it may be concluded that cardiological pharmacovigilance data must be taken care off. Although, the incidences are rare (1 in 10000) but chances of escalation still exists on repeated vaccinations.