

Role of Statins in COVID-19 Pandemic: A Perspective

Aravind Kumar Subramanian^{1*}, Xavier Christu Rajan V²

¹Department of Orthodontics, Saveetha University, Chennai, India; ²Department of Community Medicine, Kilpauk Medical College, Chennai, India

Corresponding author:

Aravind Kumar Subramanian,
Department of Orthopaedic Surgery,
Saveetha University,
Chennai, India,

E-mail: aravindkumar@saveetha.com

Received: 18-May-2020,

Manuscript No. AMHSR-23-11014;

Editor assigned: 21-May-2020,

Pre QC No. AMHSR-23-11014 (PQ);

Reviewed: 04-Jun-2020,

QC No. AMHSR-23-11014;

Revised: 11-Aug-2023,

Manuscript No: AMHSR-23-11014 (R);

Published: 08-Sep-2023,

DOI: 10.54608.annalsmedical.2023.124

Introduction

Novel coronavirus disease (COVID-19) is an infectious disease with an increase in mortality amongst the older population and in patients with an underlying disease like diabetes, cardiovascular, hypertension, cancer. Lung lesions are reported as severe damage in SARS CoV-2 infections. COVID-19 viral infection is predominantly observed in those with existing cardiovascular disease (10.8%) and diabetes (7.3%). The COVID-19 status in India is quite alarming. There is no specific vaccine or drug therapy available for this deadly virus as on date, which is infecting over one million people and increasing death toll rate every day. A lot of research is underway with around 100 trails to discover a vaccine. Similarly, efforts are ongoing to evaluate the effectiveness of antiviral and other antimicrobial drugs in the treatment of the disease.

Description

Pre-existing cardiovascular disease is the more common risk factor for COVID-19. Studies published by Ruan et al, based on the analysis of 150 patients in Wuhan province, China reported marked elevations in mortality of COVID-19 patients with underlying cardiac manifestations. Few observations published on the web in recent days indicates the use of statins in the treatment of COVID-19, but there is no clinical evidence available for this.

In general, statins are considered to be a safer drug. Theoretically, statins protect the innate immune response in COVID-19 patients. A study published by Totura et al, showed that signalling of TL3-Toll Like receptor 3 found to protect innate immune response to SARS-CoV infection. Similarly, TL4-Toll Like receptor 4 have emerged to prevent damaging inflammatory response in SARS-CoV. Shu Yuan demonstrated the use of statins in regulating the innate immune response to MERS-CoV infection, MYD88, a toll-like receptor that plays a vital role in the management of acute respiratory infections. Deficiency of MYD88 resulted in higher death rates in MERS-CoV. MYD88 level remains unaffected with the use of statins. Atorvastatin, commonly

available OTC drug maintains the MYD88 at a normal level in severe acute respiratory infections.

COVID-19 pandemic has infected millions of patients putting unprecedented strain on the healthcare system around the world. Based on the current literature and available data, the mortality rate is found to be significantly higher in cardiovascular patients. Therefore, we would like to raise the awareness that the utmost care must be given to cardiovascular patients affected by COVID-19.

Conclusion

Usage of statins as prescribed by the physicians to prevent innate immune response in COVID-19 affected patients. As currently there is no clear evidence about the mechanism of these drugs on COVID-19 infection, caution must be taken into consideration while treating the cardiovascular patients affected with COVID-19 pandemic. Hepatic considerations are important while initiating statin therapy. Statin therapy must not be considered if the patients have elevations in the ALT/AST/bilirubin levels two-three-fold rise than the normal levels.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

How to cite this article: Subramanian AK, et al. Role of Statins in COVID-19 Pandemic: A perspective. Ann Med Health Sci Res. 2023;13:782.