An Overview of the human immune system response in Betacoronavirus infection and comparison it with Covid-19 infection

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Abstract

Sars-Cov2 infection is the most important health crisis of the recent century. SARS-Cov-2 is a member of coronaviridae family and the genus Betaoronavirus. Earlier, the world experienced outbreaks of two other members of Betacoronavirus genus in 2002-2003 and 2011 with the SARS-Cov and MERS viruses respectively, both of which were global threats to the pandemic. The most prominent clinical sign of these viruses is acute respiratory tract syndrome. The clinical signs of SARS-Cov2 virus have a very wide range from asymptomatic infection to acute respiratory tract syndrome and death. Immune system has critical role in the development of these types of clinical symptoms. SARS-Cov-2 has genome similarity with SARS-Cov and MERS viruses. The range of clinical symptoms are similar in all three viruses, therefore following the immune response against SARS-Cov and MERS viruses can be effective in understanding and predicating immune response to SARS-Cov2 infection. in this article, we review the immune response against SARS-Cov and MERS viruses and compare it with SARS-Cov2 immune response. Clinical evidence suggests a similar pathophysiology in SARS-Cov2 and two other important Betacoronavirus infection. Comparing immune response in SARS-Cov and MERS viruses' infection with covid -19 infection help to better understanding of the host pathogen interaction, host immune response and pathogen immune evasion in SARS-Cov2 infection. Our goals in this article are to review the immune system response in SARS-Cov and MERS infection and to compare it with Covid-19 infection. Another aim of this article is to compare the immune system response in asymptomatic covid-19 infection with acute clinical symptomatic infection.

Recent Publication

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Poupak Mortazkar,The study of antiviral effects of Glycyrrhiza Glabra extracts on HSV,journal of medical plants,years7,issue4,series 28



Biography

Poupak Mortazkar has completed her Clinical Virology PhD degree from Iran International Medical University and she is in clinical attachment of Oman Ministry Of Health. She has Master degree in Medical virology. She has published 2 papers in reputed journals and has detected 4 new strains of Anellovirus in iranian Virome for the first time.

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