

Respiratory illness virus infections with special emphasis on Covid-19

Lekha Gandhi¹, Deepti Maisnam¹, Deepika Rathore¹, Preeti Chauhan¹, Anvesh Bonagiri¹, and Musturi Venkataramana¹

¹University of Hyderabad

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Abstract

Viruses that emerge pose challenges for treatment options as their uniqueness would not know completely. In spite of large diversity, viruses share common characteristics for infection. There are at least 12 different respiratory borne viruses that belong to different virus taxonomic families. Many of these viruses multiply and cause damage to the upper and lower respiratory tracts. The description about these viruses in comparison to each other with reference to their epidemiology, molecular characteristics, disease manifestations, diagnosis and treatment is lacking. Such information helps to diagnose, differentiate and for formulating the control measures at faster pace. The leading cause of acute illness worldwide are the acute respiratory infections (ARIs) and are being responsible for nearly 4 million deaths every year which are mostly in young children and infants. Among the above ARIs, influenza, respiratory syncytial virus (RSV), parainfluenza virus type 3 (PIV-3), Streptococcus pneumoniae, Haemophilus influenzae and corona viruses are the main infectious agents. WHO recognized respiratory syncytial virus, parainfluenza viruses, coronavirus, rhinovirus, and human metapneumovirus [non-influenza RNA respiratory viruses (NIRVs)], as considerable global health burden. Lower respiratory tract infections are the fourth most common cause of death globally, after the non-infectious chronic conditions. This review aimed at presenting the characteristics of different viruses causing the respiratory infections highlighting the uniqueness of Covid-19. We expect that this review would help in understanding the similarities and differences among the closely related viruses causing respiratory infections and hence to formulate the specific preventive or control measures.

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