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Coronavirus Disease-2019 (COVID-19)

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INTRODUCTION

With the introduction and spread of 2019 novel coronavirus (2019-nCoV), also known as the severe acute respiratory syndrome coronavirus 2, there is a new public health crisis that threatens the entire world (SARS-CoV-2). In December 2019, the virus spread from bats to humans via unidentified intermediary species in Wuhan, Hubei Province, China. As of today (05/03/2020), there have been approximately 96,000 confirmed cases of the coronavirus disease 2019 (COVID-2019) and 3300 confirmed fatalities. The disease has an incubation period of 2 to 14 days and is spread through inhalation or contact with infectious droplets. Common symptoms include a fever, cough, sore throat, shortness of breath, exhaustion, and malaise. Most persons with the disease have a moderate case; however, certain people (typically the elderly and those with concomitant conditions) may develop pneumonia, acute respiratory distress syndrome (ARDS), and multi-organ failure. Many folks don't show any symptoms. According to estimates, the case fatality rate lies between 2 and 3%. Specialized molecular assays used for diagnosis show the virus in respiratory secretions. Normal or low white cell counts and high C-reactive protein are typical test findings (CRP). Even in people with no symptoms or moderate disease, the computed tomographic chest scan is typically abnormal. The role of antiviral medicines has not yet been defined; the focus of treatment is mostly supportive. Strict infection control procedures at hospitals, such as isolation of suspected cases and people with minor diseases, are necessary for prevention. The virus has a lower fatality rate than its two ancestors, the Middle East respiratory syndrome coronavirus (MERS-CoV) and SARS-CoV. This new epidemic's potential worldwide effects are not yet known.

With spike-like projections on their surface that give them a crown-like appearance under an electron microscope, coronaviruses are enveloped positive sense RNA viruses that range in diameter from 60 nm to 140 nm. Humans have been exposed to four corona viruses: HKU1, NL63, 229E, and OC43. These viruses often produce a minor respiratory illness.

In two instances over the past 20 years, human infection with animal betacorona viruses has led to serious illness. The first such incident occurred in the Guangdong province of China in 2002–2003 when a novel coronavirus of the genus and with origins in bats infected humans via the intermediary host of palm civet cats. Before it was contained, the severe acute respiratory syndrome coronavirus, which mostly afflicted 8422 people in China and Hong Kong, caused 916 fatalities (mortality rate 11% of cases). In 2012, about ten years later, the Middle East respiratory syndrome coronavirus (MERS-CoV), which is likewise of bat origin, appeared in Saudi Arabia using dromedary camels as the intermediate host. It infected 2494 individuals and killed 858 (a fatality rate of 34%).

The economic, medical, and public health infrastructure in China as well as, to some extent, in other nations, particularly its neighbours, has been pushed to the limit by this recent virus outbreak. How the virus will affect our life here in India will only become clear with time. Furthermore, zoonotic virus and disease outbreaks are expected to persist in the future. Therefore, efforts should be made to develop comprehensive strategies to prevent future outbreaks of zoonotic origin in addition to containing this outbreak.