

Novel Coronavirus Disease (COVID-19)

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ABSTRACT

There is a new public health climacteric forbidding the world with the emergence and spread of 2019 novel coronavirus (2019-nCoV) or the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The virus originated in bats and was transmitted to humans through yet unknown intermediary animals in Wuhan, China in December 2019. India being a dense populated country is also in third stage of virus transmission. This study aimed at investigating the global prevalence, biological and clinical characteristics of novel coronavirus. At this stage, preparedness, transparency, and sharing of information are crucial to risk assessments and beginning outbreak control activities. This information should include reports from outbreak sites and from laboratories supporting the investigation.

There have been about 6.5 million reported cases of coronavirus disease 2019 (COVID-19) and about 350 000 reported deaths throughout the world within the last 6 months from the onset of the epidemic. Last few days recent update of COVID-19 in India 41,790 new cases and 542 new deaths. Human infections with zoonotic coronavirus contain emerging and re-emerging pathogenic characteristics which have raised great public health concern. The virus is primarily transmitted by inhalation or contact with infected droplets. The COVID-19 patient usually presents with fever, cough, sore throat and breathlessness. Treatment is essentially supportive; role of antiviral agents is yet to be established. Prevention entails home isolation of suspected cases and those with mild illnesses and strict infection control measures at hospitals that include contact and droplet precautions. The case fatality rate of SARS-CoV-2 is lower than that of its two coronavirus predecessors, that is, severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV). The full impact of this new pandemic on health, social and economic well-being of humankind is yet to be grasped.

KEYWORDS:- COVID-19, climacteric, India, information, emerging and re-emerging, SARS-CoV, SARS-CoV-2.

Date of Submission: 23-07-2021

Date of acceptance: 08-08-2021

I. INTRODUCTION:-

Novel coronavirus (nCoV-2019) also termed as **severe acute respiratory syndrome coronavirus 2** (SARS-CoV-2) causing novel coronavirus disease 2019 (COVID-19) is an ongoing pandemic outbreak of coronavirus family, initially appeared in city's Wuhan, China, on 17th November 2019 in a 55-year-old person, according to the unpublished Chinese media reports.^[1,2]

Though, the cause of the illness has not been identified till but Bats were considered as primary reservoir of virus. China reported country office of World Health Organization (WHO) China regarding unusual pneumonia cases in Wuhan (central Hubei province) first time on 31st December 2019.^[3,4] Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. The best way to prevent and slow down transmission is to be well informed about the COVID-19 virus, the disease it causes and how it spreads. Protect yourself and others from infection by washing your hands or using an alcohol based rub frequently and not touching your face. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow).^[5]

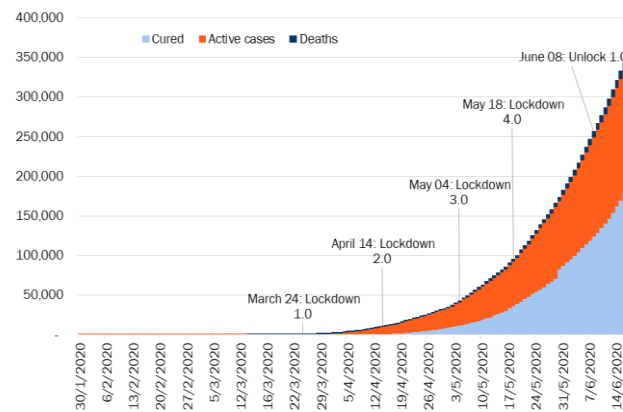
History

Coronaviruses are enveloped positive sense RNA viruses ranging from 60 nm to 140 nm in diameter with spike like projections on its surface giving it a crown like appearance under the electron microscope; hence the name coronavirus.^[6] Four corona viruses namely HKU1, NL63, 229E and OC43 have been in circulation in humans, and generally cause mild respiratory disease. There have been two events in the past two decades wherein crossover of animal beta corona viruses to humans has resulted in severe disease.^[7]

Total Coronavirus Cases in India

The first COVID-19 case in India was detected on January 30, the same day that WHO declared it a public health emergency of international concern. India went into lockdown almost two months later. On June 8, after 10 weeks of lockdown, India started a phased reopening of its economy. With Unlock 1.0, the country is trying to balance attempts to revive the economy while dealing with increasing caseloads and new hotspots. On June 30, official COVID-19 cases stood at over 585,000, and more than 17,500 deaths (Figure 1).

Figure 1. Total (cumulative) number of cases of COVID-19 in India

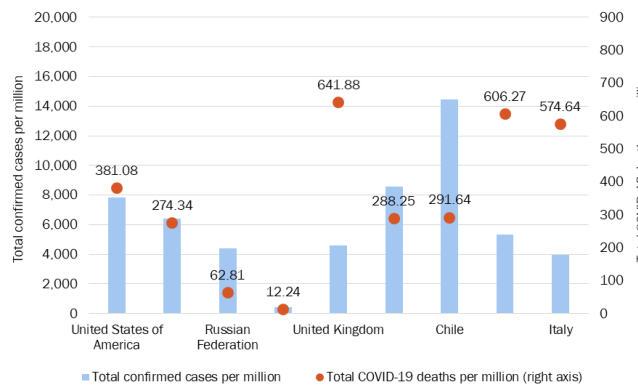


Source: Ministry of Health and Family Welfare, Government of India.

BROOKINGS

While recovery rates have improved to 60 percent and the death rate is relatively low considering that India is the fourth most-impacted country globally, COVID-19 in India is nowhere close to the peak (Figure 2).^[8]

Figure 2. International comparison of total cases and deaths per million as of June 30, 2020



Source: Author calculations based on data from World Health Organization, Johns Hopkins Coronavirus Resource Center.

BROOKINGS

Stage 3 refers to community transmission. It is considered to be the most critical stage during an outbreak. In Stage 3, an epidemic spreads fast, as it gets difficult to trace the original source of transmission.^[9] Community transmission is the third of the four stages of a pandemic, according to the World Health Organization (WHO). Community transmission is a stage when you are not able to track down the source of infection of a positive case despite thorough contact tracing. Then it is presumed that the virus is in general being transmitted in the community. For example, if a person has contracted the virus and the authorities are not able to trace the contact or the source of the infection and this happens with several positive case, then it can be inferred that the

virus is in the community transmission stage. The WHO has described community transmission as "evidenced by the inability to relate confirmed cases through chains of transmission for a large number of cases, or by increasing positive tests through sentinel samples (routine systematic testing of respiratory samples from established laboratories). The community transmission can also be localised. On June 11, the government asserted that India was definitely not in the community transmission stage of COVID-19 spread, trying to refute the statement by some experts and doctors. Indian Council of Medical Research (ICMR) Director-General Balram Bhargava said, "There is a heightened debate around this term community transmission. Having said that I think even WHO has not given a definition for it. And as we have so shown that India is such a large country and the prevalence is so low." "The prevalence has been found to be less than 1 per cent in small districts. In urban and containment areas it may be slightly higher. But, India is definitely not in community transmission. I would like to emphasise it," he added.^[10]

Prevention:-

COVID-19 is spreading in your community, stay safe by taking some simple precautions, such as physical distancing, wearing a mask, keeping rooms well ventilated, avoiding crowds, cleaning your hands, and coughing into a bent elbow or tissue.^[11] The world is in the midst of a COVID-19 pandemic. As WHO and partners work together on the response -- tracking the pandemic, advising on critical interventions, distributing vital medical supplies to those in need--- they are racing to develop and deploy safe and effective vaccines. Vaccines save millions of lives each year. Vaccines work by training and preparing the body's natural defences – the immune system – to recognize and fight off the viruses and bacteria they target. After vaccination, if the body is later exposed to those disease-causing germs, the body is immediately ready to destroy them, preventing illness. There are several safe and effective vaccines that prevent people from getting seriously ill or dying from COVID-19. This is one part of managing COVID-19, in addition to the main preventive measures of staying at least 1 metre away from others, covering a cough or sneeze in your elbow, frequently cleaning your hands, wearing a mask and avoiding poorly ventilated rooms or opening a window. The COVID-19 vaccines are safe for most people 18 years and older, including those with pre-existing conditions of any kind, including auto-immune disorders. These conditions include: hypertension, diabetes, asthma, pulmonary, liver and kidney disease, as well as chronic infections that are stable and controlled.^[12]

II. CONCLUSION:-

Thus, it can be concluded that at present COVID-19 is widely spread in India which is very harmful. And now a days vaccine has come which work on people. So, recovery of covid patient is become good. Vaccine is good preventive measures of COVID-19.

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