



# INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACEUTICAL SCIENCES

Published by JK Welfare &amp; Pharmascope Foundation

Journal Home Page: [www.ijrps.com](http://www.ijrps.com)

## COVID -19: Emerging out of the Pandemic Situation

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### Article History:

Received on: 21 Sep 2020

Revised on: 25 Aug 2020

Accepted on: 02 Sep 2020

### Keywords:

Coronavirus outbreak, COVID-19, virus transmission, treatment protocol

### ABSTRACT

The novel SARS-CoV-2 Coronavirus that emerged in the city of Wuhan, China, last year and spread all over the world countries and caused the worst ever pandemic situation. This deadly virus held the entire world to be in high alert. Considering its seriousness, the World Health Organization declared a public health emergency of international concern. Govt. of India and its all allied organizations are working together and trying hard to control it and avoid the situation of community transmission. Nationwide lockdown helped to control the transmission but after unlock it transmitted speedily in the community, which is the alarming sign for everyone. In this review, the attempt is made to focus on published research articles on coronavirus disease, mode of transmission and disinfection measures, the current state of research, treatment protocol so those common people can understand its gravity and follow the measures stringently.



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ISSN: 0975-7538

DOI: <https://doi.org/10.26452/ijrps.v11iSPL1.3670>

Production and Hosted by

IJRPS | [www.ijrps.com](http://www.ijrps.com)

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### INTRODUCTION

Coronaviruses are a group of viruses responsible for developing a range of illnesses from the common cold to more severe ailments such as Severe Acute Respiratory Syndrome (SARS) and the Middle East Respiratory Syndrome (MERS) which leads

to severe intestinal and respiratory illnesses. In the beginning, animals were the major source for the growth and spread of coronaviruses, but later 2003 onwards, this fact has been changed and viruses infected humans and spread from human to human which turned into a global pandemic within a small period of time (Stockman *et al.*, 2006).

Center for Disease and Control Prevention has identified the most common human coronaviruses, HKU1, OC43, NL63 and 229E (Center for Disease and Control Prevention, 2020). In the same series coronavirus disease (COVID-19), first identified in Wuhan city of China is caused by the recently discovered coronavirus serotype-2 which is zoonotic in nature but now spreading human to human through airborne droplets all over the world causing thousands of lives and global concern (Rathi and Rathi, 2020). According to the World Health Organization (WHO) situation information, the worldwide distribution of COVID-19 is intensifying each and

every day. According to the data updated on 8<sup>th</sup> Aug 2020, the confirmed cases of COVID 19 have reached whooping 2 Crore with 7 lakhs deaths throughout the world. WHO classified the threat of COVID19 transmission as very high at a global level ([World Health Organization, 2020](#)). The incubation period of the disease is expected to be between 2 to 15 days, and its transmission from asymptomatic cases has been reported ([Tang et al., 2020](#)). As the screening and detection methods have grown up in most of the countries, more COVID 19 cases are predicted to be detected in the days ahead and death rate may swell up from these infected individuals.

In such a pandemic situation, it's become compulsory for each and every individual to know what is right and what is wrong and how to come out of this pandemic situation. Need to adopt strict disinfection measures to avoid further transmission of the disease and save lives. Hence in this article attempt is made to know and aware about the disinfection measures to be adopted by the common people, mode of transmission, the current state of research, treatment protocol so those common people can understand its gravity and follow the measures stringently.

## MATERIALS AND METHODS

In the present review relevant references and published scientific research papers related to COVID-19 were searched on Pubmed, Scopus, Web of science, Medknow, Ayushdhara and Google scholar by using relevant keywords such as Novel Coronavirus, COVID-19, corona viral outbreak etc. All the references were reviewed, compiled, analyzed and discussed thoroughly for the in-depth understanding of the concept of what is right and what wrong measures for COVID-19 pandemic.

### Observation & Results

The outcome from this review reveals that the COVID-19 transmission is rapidly occurring in human throughout the globe resulting in severe casualties. Scientist all over the globe is involved in finding its mutation risks source of virus spread which is yet to be identified. Detail source of the virus, epidemiology and transmission enforced a big challenge, which emphasizes the need for advance studies in the near future.

### Clinical and Epidemiological Characteristics features

Huang *et al.* from China tried to comprehend the disease characteristics and outcomes. For this, they collected data of 41 confirmed patients of COVID-19 and analyzed it. They were surprised to know

that many of the earlier identified cases were associated with the animal market and Huanan seafood situated in Wuhan, which gives a confirm clue of connection of the new virus with an animal. They also noticed the resemblance between the SARS and COVID-19 as both diseases leads to fetal pneumonia. But still, the pathophysiology of the new disease remains unknown. The initial study revealed that most of the infected patients were males above 60 yrs of age and quite often visited the seafood market or in contact with a person suffering from respiratory problems. ([Huang et al., 2020](#)).

### Case Identifications and mode of Virus Transmission

Various measures have been suggested for the clinical assessment of the signs and symptoms of COVID-19. Naso-pharyngeal and Oro-pharyngeal swabs, laboratory investigations and radiological tests are few suggested measures to confirm the diagnosis and other allied complications. Phan observed the possible transmission of the virus from human to human within the family members who were having the travel history from red zone area to green zone area and stayed with other family members or came in contact with other individuals ([Phan et al., 2020](#)).

### Coronavirus outbreak as an international emergency

Till 23<sup>rd</sup> of January, the occurrence and spread of COVID-19 cases was limited to China only and not well-thought-out as Public Health Emergency. Till that date, it was considered that this disease leads to symptoms of severe respiratory illness and nearly five hundred cases were declared confirm in China and neighbouring countries like Thailand, South Korea and Japan. Considering its further spread in other provinces, China Government had taken strict measures such as isolation of suspected cases, ban on travelling, public awareness about diagnosis and treatment. But despite such measures, infected cases were continued to increase day after day and turned into an epidemic ([The Lancet, 2020](#)). New Cases deaths were also reported among travellers in China and other countries. Considering the seriousness of the disease, on January 30<sup>th</sup> 2020, World Health Organization (WHO) declared coronavirus disease as a global public health disaster of international concern, which pointed out the worldwide spread of the disease and required synchronized universal support to control the outbreak ([Gralinski and Menachery, 2020](#); [Sohrabi et al., 2020](#)).

### Measures to be adopted

The Government heads in Wuhan, as well as other countries, have made much effort to control the

virus which included imposing a nationwide ban on wildlife trade in markets, closing the animal and seafood markets and performing sanitation and disinfection of public places. Major countries like Japan, Germany, France, UK, and USA announced the suspension of the closure of airports, ban on public transportation like bus and railways to prevent further disease transmission. In India, the Government imposed order 144, which banned the gathering of 5 or more persons in public places. The Centers for Disease Control and Prevention suggested preventive measures in order to control the infection in public places and healthcare supporters. The preventive measures included to wash the hands with soap and water for at least 30 seconds or with alcohol-based hand sanitizers frequently, to wear a face mask whenever we go out of the home, encouraged work from home instead of going to the office, to avoid touching the mouth, nose and eyes with unwashed hands, to avoid touching doors, handles, to avoid the gathering in marriages, conferences, sports events or funerals. Medicated fumigation is helpful as an air purifier, germ killer-bacteriostatic, prevents vector-borne diseases (Omer *et al.*, 2020; Rathi *et al.*, 2020). World Health Organizations and various Government organizations engaged in health promotion campaigns as a part of educating the people to minimize the COVID-19 infection transmission to others.

### COVID-19 scenario in India

As of today, across the globe, the total tally of corona virus-positive cases has crossed whopping 2 Crores and death toll to 7.20 lakhs. Daily new cases are occurring more than 3 lakhs and daily deaths are crossed 7000. The worst affecting country is the USA where the death tally crossed to 1.63 lakhs due to coronavirus disease. In India, the total number of coronavirus cases jumped to 21 lakhs with 42000 deaths. Maharashtra proved to be worst affected state with 5 Lakhs COVID-19 cases with more than 18000 deaths followed by Tamilnadu, Andhrapradesh, Karnataka and Delhi among the most affected states. To control the spread of coronavirus, Govt. of India has declared complete lockdown across India for 4 times with essential services exempted. Later Prime minister let the decision to state governments to take the decision of lockdown according to the COVID-19 situation in the respective states. This helped the Govt. to control the situation and limited the number of COVID-19 cases.

### Treatment protocol and recovery rate

Till today, neither any specific medicine for coronavirus infection is currently available, nor any vaccine is invented to prevent COVID-19 and the

researches on vaccine development programs are going on war foot level (Carlos *et al.*, 2020). After the individual gets infected, the treatment and resurgence depend upon the severity of the sign and symptoms and related complications. It is very much encouraging that most of the infected cases are cured. Recovery rate in India is far better as compared to global recovery rate.

All the developing countries, including China and India, are engaged in clinical trials in order to find a satisfactory solution for COVID-19. Some compounds, including chloroquine/hydroxychloroquine, remdesivir, ritonavir, lopinavir, interferon- $\beta$ , azithromycin, ribavirin have come out as promising alternatives to treat the COVID-19. These drugs block the virus from entering host cells, check viral replication, and ease exacerbation of the host's immune response.

Lovato *et al.* (2020) patients treated with this drug have shown a significant drop in fever, progress in CT images of lung and taken a shorter time to cure as compared to parallel groups (Cheng *et al.*, 2020; Gautret *et al.*, 2020). Another anti-viral drug under trial is favilavir, which demonstrated efficacy in treating 70-patients of COVID-19 with minor side effects. For the first time, National Medical Products Administration of China has given the approval to this drug to treat COVID-19 patients. Research Labs of many pharmaceutical companies are engaged in COVID-19 vaccine development (Altakarli, 2020). Dept of AYUSH, Govt of India has undertaken no. of trials on traditional medicines considering their role in immunity boosting. Several measures and medicines are mentioned in Ayurveda to combat with the COVID-19 like a pandemic. Use of kitchen herbs, spices like turmeric, black pepper and herbal tea with ginger may protect from coronavirus effectively (Bhokardankar *et al.*, 2020; B Rathi *et al.*, 2020).

### DISCUSSION

Considering the Human-to-human coronavirus transmission, it is expected that more COVID-19 cases will be reported in the near future, which can cause serious trouble to worldwide public health organization and financial losses (Munster *et al.*, 2020). Government organizations all over the world are engaged to implement strict preventive measures, and investigating the source of the disease to know more about the virus's characteristics, mode of transmission and illness severity (Altakarli, 2020).

It is the need of the hour to have a better understanding of the currents updates of a new virus. It

is up to the countries to provide reliable data with an open mind, as well as conducting clinical trials on the reported cases. So that an effective medicine can be invented without delay to save the lives, at the same time, countries should keep attention to work on improving the preventive measures implemented to decrease the number of COVID-19 and transmissions. Till the invention of new medicine, the vaccine is only last hope of every people for getting out from COVID-19 pandemic. But as per experts, it has said that if any vaccine is invented now, then it nearly took 1-2 years to hit it to the market.

## CONCLUSION

In such a pandemic situation, it's a duty of each and every individual to know what is right and what is wrong and follow the disinfection measures meticulously to avoid further transmission of the disease. Although the scientists are involved in searching the effective medicine to overcome the virus and some evidence indicated the positive results, it will take time to validate and standardize these agents to prove their therapeutic value in human beings.

## ACKNOWLEDGEMENT

Author would like to thank DMIMSU for motivating and providing all necessary help for writing this article.

## Funding Support

DMIMS (Deemed to be University), Sawangi (Meghe), Wardha.

## Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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