

Corona Virus Pandemic in India and Its Impact on Health

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ABSTRACT

The severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is the major pandemic that occurred first in Wuhan, from where it spread to many places all over the globe. The first case in India was reported in January 30, 2020. Due to this pandemic, lockdown has been put forth which affected the life of people both in urban as well as rural areas where people were not allowed to move freely. The lockdown shattered the economy of the country as well as the globe. Life had become so complicated and restrictions had major impact on transport, where the public

transports stopped functioning. Health of the public was affected the most because they weren't aware of the precautions at its early stages. People from other places were restricted and the tourism chain was impacted, and most importantly education of the children was a big question mark. Financial sector also faced a major impact due to this lockdown.. The symptoms are fever, cold, cough and it infects the respiratory passage. The treatment has yet to be confirmed, hence a mixture of antiviral, antifungal drugs are given, intravenous immunoglobulin treatment has been given. Usage of masks, avoid being in a crowd are the steps to prevent coronavirus. This article concentrates mainly on the health impacts of people due to coronavirus.

Keywords: coronavirus, pandemic, lockdown, health impact.

INTRODUCTION:

Coronavirus also known as COVID-19 is a group of viruses that affects the mammals and birds. Taxonomy is that the family is coronaviridae, order is nidovirales [(1)]. Coronavirus or acute respiratory syndrome coronavirus 2 (SARS CoV-2) is very rapidly spreading from Wuhan city to all over the world. Coronaviruses are enveloped positive sense RNA viruses starting 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 [(2)]. The first case of coronavirus pandemic in India was reported on 30th January 2020. 56,342 cases have been confirmed as of 8th May 2020. In India it has been reported that 1.7% significantly lower than in the worst affected countries [(3)]. India is the second most populous country and it will have an enormous impact on the world's ability to deal with [(4)]. Confirmed cases crossed 100 on 15th march and crossed 1000 on 29th April. The ministry of health and family welfare has stated that there are severe cases in 23 states/villages [(2)].

All ages are susceptible. Infection is transmitted through large droplets generated during coughing and sneezing by symptomatic patients but can also occur from asymptomatic people and before onset of symptoms [(5)]. Studies have shown higher viral loads in the nasal cavity as compared to the throat with no difference in viral burden between symptomatic and asymptomatic people. Patients are often infectious for as long because the symptoms last and even on clinical recovery. Some people may act as super spreaders. [(6)]

The states and localities are taking different steps to cope up with this pandemic. Ever Since the outbreak the clinicians, scientists and authorities who are responsible for health are trying to find clinical presentations [(7)]. People who are in quarantined areas tend to feel bored, anxious, loneliness. [(8),(9),(10),(11)]. Not only has the pandemic impacted the physical health of several thousands but it has also mentally affected the mental health of the entire globe and poses a health emergency of global concern. In a survey conducted one month after December 2019 in Wuhan China, PTSS (Post Traumatic Stress Symptoms) and sleep qualities among 285 residents in Wuhan and surrounding cities were collected. PTSS was found to be significantly high and 7% higher in women [(12)]. As of 22nd june, 4,25,282 cases have been reported in which

2,37,196 recoveries and 13699 deaths [(13)]. Our team has rich experience in research and we have collaborated with numerous authors over various topics in the past decade (14–38).

IMPACT ON HEALTH :

This coronavirus is a global pandemic, where the people's health is at stake. Due to its lockdown and the spread of this disease, it caused fear and anxiety among the public [(39)]. In this time, the information, myths about this pandemic on social media affected people psychologically [(40)]. Increased use of sanitizers and masks had resulted in resource depletion [(41)]. The elevated usage of PPE caused shortage for the healthcare workers across the world [(42)]. The increase in anxiety in a larger population may cause panic buying, self medication, exhausting the resources and much more [(43)]. People started indicating negative mental health impacts and found support in family and friends [(44)]. People felt the lockdown to be more stressful and horrifying [(45)].

CORONAVIRUS IN CHILDREN:

Infants were vulnerable to this infection, who were under the age of 18 months where they were admitted due to pneumonia [(46)]. The case rises when the lower respiratory tract is affected [(47)]. whereas the younger children showed much less vulnerability to the disease than the adults [(48,49)]. Children show very less symptoms or asymptomatic prior to the test [(50)]. There is a diminished clinical impact of COVID-19 in the pediatric population, both in terms of volume and severity. Acute kidney injury is more common among patients with more severe disease, especially in the intensive care unit (ICU) setting, and considered a negative prognostic factor with respect to survival [(51)]. Children who were admitted were less than 1% of the total cases. Children who are diagnosed tend to have respiratory and extra respiratory problems. Only 5% of the infected children were admitted in the intensive care unit. Less than 1% of the children required mechanical ventilation [(52)]. 1.7% of the cases recorded were less than 18 years. Most of the children have very mild symptoms, often asymptomatic. In severe cases they tend to develop dyspnea after a week and acute respiratory distress syndrome, septic shock and coagulation dysfunction. Clinical manifestation in children include cold, cough, with minimal fever or no fever, decreased WBC count with decreased lymphocyte count [(53)].

CORONAVIRUS IN PREGNANT WOMEN:

Pregnant women were also susceptible to coronavirus to some extent. Pregnant women who were tested positive, [(54)] tend to have fever, myalgia and sore throat and malaise and much more. They tend to show intrauterine foetal distress, premature birth, cesarean deliveries. Their symptoms are similar to those of non pregnant women. Their pregnancy also had an impact on their children, where some infants were born with severe acute respiratory symptoms requiring surfactant. The clinical features include sepsis, DIC, renal failure. 40% of pregnant women required artificial ventilation to 13% non-pregnant women. Hence care should be taken [(55)].

CORONA VIRUS IN ELDERLY PEOPLE:

Hospitals in the US for treating COVID-19 finds that 89.3% of 1,482 hospitalized patients had one or more underlying conditions. The most common were hypertension (49.7%), followed by obesity, chronic metabolic disease (such as diabetes), chronic lung disease (including asthma) and cardiovascular disease. Patients 50 and older comprised 74.% of cases, and 54.4% were men [(56)]. Dyspnea, comorbidities of cardiovascular disease and COPD, lymphocytopenia, and ARDS, could predict the risk of death among the elderly. These factors should be considered for risk stratification [(57)]. In a study conducted in Wuhan, China, 244 patients 60 years and above with definite clinical symptoms were observed. Most patients had fever (86.5%) and respiratory symptoms (88.5%), mainly dry cough (73.4%). Approximately one- third of patients experienced digestive symptoms, such as diarrhea. Among all patients, 21% had diabetes, while 14.4% had coronary heart disease [(58)].

CLINICAL MANIFESTATION:

Common symptoms are fever, dry cough and tiredness. Less common symptoms include, aches and pains, sore throat, diarrhoea, conjunctivitis, headache, loss of taste or smell, rash on skin and discoloration in toes and fingers. Serious symptoms include, shortness of breath, difficulty in breathing, chest pain or pressure and loss of speech or movement[(59)]. In a study conducted in China with 1099 patients it was found that the most common symptoms were fever (43.8% on admission and 88.7% during hospitalization) and cough (67.8%). Diarrhoea was uncommon (3.8%). Interestingly, over the last few weeks, there has been an apparent cluster of children presenting with Kawasaki disease (KD)-like symptoms in the United Kingdom, United States and Italy. The reported cases have overlapping blood parameters and presenting symptoms consistent with COVID-19 in children. Some of these children patients have confirmed SARS-CoV-2 infections. Even though the relationship of KD to COVID-19 is not yet defined, there is growing concern of SARS-CoV-2 infection related inflammatory syndrome as a possible link between coronavirus infection and KD affecting young children [(60)]. Thrombotic complications seem to emerge as an important issue in patients with COVID-19. Preliminary reports on COVID-19 pandemic outcomes have shown that infected patients commonly develop thrombocytopenia (36.2%) and may have elevated D-dimer (46.4%) , while these rates are even higher in patients with severe COVID-19 disease (57.7% and 59.6%, respectively) . Emerging data support that patients infected by this novel coronavirus are at risk of developing disseminated intravascular coagulation (DIC) [(61)].

DIAGNOSIS:

According to WHO, the priority for coronavirus diagnosis is the nucleic acid test and protein test [(62)]. Mainly diagnosed by reverse transcription PCR, samples collected using Dacron swab, BAL fluid, endotracheal aspirate and tissue. Chest X-ray which is simple and not very distinct

can be used in early disease and CT scan which is distinct is also used to diagnose the virus [(63)].

TREATMENT AND PREVENTION:

Isolation is a major step which prevents the further transmission of the virus to healthy individuals and health care workers. Once infected, the principle to survive is to maintain hydration, nutrition and controlling fever and cough. Antiviral, intravenous immunoglobulin therapy, antibiotics were some of the treatments that were given to adults. Children recovered with basic treatment not involving intense care. [(2)] Most people who are diagnosed positive, having respiratory tract infections and difficulty in breathing were given oxygen upto 76% . Since no proper treatment has been found, as the saying goes, prevention is the better cure. Avoid being in a crowd, using sanitizers and masks. Social distancing is the key to prevent coronavirus [(64)]. Our institution is passionate about high quality evidence based research and has excelled in various fields (65–75)

CONCLUSION:

Coronavirus is a global pandemic which needs to be controlled and prevented at the earliest. Major risks and impacts are being faced by the people all over the country and this situation is likely to continue. Hence the prevention is required the most. Thus the present study helped in understanding the origin and spread of coronavirus and impact it had brought on the nation.

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CONFLICT OF INTEREST:

No conflict of interest declared.

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