

## Editorial

# COVID-19: Current Issues and Challenges

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On March 12, 2020, the World Health Organization (WHO) declared coronavirus disease 2019 (COVID-19) a pandemic as the first 2 months of the year 2020 witnessed the rapid spread of infection across countries and continents and has penetrated 216 countries globally. As of today (September 11, 2020), this disease has infected 27,973,127 individuals worldwide and caused 905,426 deaths.<sup>1</sup>

At present, India reported the third largest number of confirmed cases after United States and Brazil but has relatively low infection rate per 1,00,000 population. The testing strategies are also changing with time. We initially tested people with respiratory symptoms or those who travelled from COVID-19-affected countries, later focused to contact tracing of those who tested positive. Presently, we are following WHO recommendations “test, identify, treat, trace contacts, and test” strategy. As large number of people are being tested in India, there will be larger number of confirmed cases even if there is no rise in positivity rate. The case fatality rate in India is lower (2.8%) as compared to the world (4.8%), United States (3.9%), and Brazil (3.8%).<sup>2</sup>

Various measures were taken to control the spread, by disease screening and quarantine of travelers from affected countries and later banning inward travel from these countries, imposing lockdowns of varying duration to control the spread of infection across states and from urban to rural areas, globally and also in India. The lockdowns slowed down the disease spread to some extent. This time was utilized by healthcare policy makers to prepare the healthcare system to cope with the anticipated increase in infection and simultaneously efforts were made to generate awareness among the population on universal precautions that should be taken to reduce the risk of infection. Various therapeutic strategies were developed like 24-hour flu screening OPDs (outpatient departments), upgradation of existing hospitals, setting of COVID-19 care new hospitals, preparing human resources and facilities for increased molecular testing laboratories, etc.<sup>3,4</sup>



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The lockdown also brought substantial collateral damage, economic slowdown, fall in industrial production, rising unemployment, poverty, and food insecurity among poor segments of society, reduction in access to healthcare for people with other illness and coverage under the national mother and child healthcare, and disease control program.

Like other countries, India has started reopening from June 08, 2020 onward; various services have been started in a phased manner in noncontainment zones, a process which has been termed as “unlock.”<sup>5</sup> The questions about how to hold gatherings of large number of people safely have become increasingly important. It is a good step that our Government has allowed a limited number of people to attend marriages, funerals, social and devotional gatherings like Jagannath Puri Ratha Yatra, etc. and even cancelled few big celebrations to avoid COVID-19 spread.<sup>6</sup>

Various research studies are underway to document natural history and modes of transmission of the infection for planning strategies to contain and control this pandemic; molecular and serological tests to diagnose and monitor trends in infection; clinical trials to evaluate efficacy of various treatments,<sup>4</sup> and development of vaccines for prevention of infection on a fast track mode. Reverse transcription polymerase chain reaction (RT-PCR) is the gold standard test for detection of COVID-19 with high sensitivity and specificity. To increase the capacity of conducting more RT-PCR tests, new laboratories were set up. ICMR (Indian Council of Medical Research) also approved some laboratories to carry out more tests. Since the RT-PCR equipments are not widely available and also it takes 5 to 6 hours to process the samples, rapid point-of-care antigen detection tests were developed, which can be done at district hospitals and results can be provided within an hour. These tests have low sensitivity but high specificity. As per ICMR guidelines, these tests should be used for large scale community-based testing in

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high case load containment zones and all those who test negative should be retested after 5 days by RT-PCR test. Currently numerous high specificity IgG (immunoglobulin G) and IgM (immunoglobulin M) antibody tests assays are available. These tests can be used for assessing the magnitude of seropositive cases and can be used for monitoring the progression of the disease and assessing the impact of various interventions to reduce the transmission rate.

In last few months, we have sufficient data to answer the best use of common interventions as universal precautions: physical distancing of at least 1 m, optimum use of proper face masks and eye protection equipment, and hand washing to reduce the chances of the spread of infection from asymptomatic infected persons.<sup>7</sup>

Healthcare workers are bearing not only work pressure, saving lives while risking their own lives but also facing the violent behavior of public due to the stigma related to the disease. Despite wearing personal protective equipments, healthcare personnel were infected by COVID-19. Majority of them recovered but few deaths have been reported from all countries.<sup>8</sup> In India till August 15, 2020 there had been nearly 200 deaths reported due to COVID-19 among doctors.<sup>9</sup> At one end we have lost many healthcare workers, on the other end these recovered healthcare workers “corona warriors,” donated plasma to treat COVID-19 patients.<sup>2</sup>

In some countries hydroxychloroquine has been used empirically as a nonspecific drug in the treatment of moderate COVID-19 infection; however, recent global trials have not shown any useful results. Hydroxychloroquine and lopinavir-ritonavir have not shown any reduction in the mortality of hospitalized patients when compared to standard care.<sup>1</sup> Global trials with antiviral agents for treatment of COVID-19 may become available in the next few months. There are some reports of beneficial effect of convalescent plasma infusion on severity and duration of severe COVID-19 infection. The ongoing clinical trials to assess its role are expected in next few months. In some patients there may be increased risk of venous and arterial thrombosis of large and small vessels, especially pulmonary vessels and can manifest also as disseminated intravascular coagulation, multiorgan failure, deep vein thrombosis, and pulmonary embolism. Such patients may be benefited from corticosteroids and anticoagulant treatments. Severely ill patients may suffer from septic shock, cardiomyopathy, and acute kidney damage and may even require dialysis.

Various national and international agencies are reviewing the available data and modifying the guidelines for management. One recent study has analyzed the clinical trials registered in Clinical Trial Registry of India till July 11, 2020. Out of total 203 trials, three are international and rest 200 national. It was concluded that there is a need for international collaboration to initiate multinational allopathic trials. The availability of a safe and effective vaccine will be an additional tool to control this pandemic. Once it is available it will be useful in preventing infection in high-risk cases.<sup>10-12</sup>

There is a growing realization that the situation is unlikely to change in the foreseeable future and we have to

learn to live with the virus by taking precautions to reduce the spread of infection, providing care for those who are infected, and minimizing the adverse consequences of this pandemic on the delivery of other health services including national disease control programs, maternal and child healthcare and also to clear the backlog of cases in whom treatments were deferred.<sup>2,13</sup> Even as we fight this pandemic, we must be readying ourselves for future global outbreaks, as said by Director-General, WHO.<sup>1</sup> It is also a time to prepare ourselves for future of health and medical education. It is challenging time to recall medical students and also prepare them for the *new normal* in future. Equally challenging is reopening of schools where parents, teachers, and policy makers are looking at health experts for guidance.<sup>14</sup>

In continuation to previous special issue on COVID-19, the latest updates regarding involvement of different organ systems in this disease and mental health issues of healthcare workers will be covered in this issue.

#### Conflict of Interest

None declared.

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