COVID-19 Pandemic in India: Present Scenario and a Steep Climb Ahead

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Abstract

Amid the ongoing COVID-19 pandemic, India has witnessed a massive surge of cases in the past 3 weeks. As of April 30, 33,610 confirmed cases and 1,075 deaths have been reported from 32 states/union territories in India. Apart from the nationwide lockdown, India has increased its testing rate and has markedly strengthened the health care sector to combat COVID-19. With India's population of more than 1.3 billion people at a significant population density compared with the rest of the world, the lack of universal access to clean water and overall poor socioeconomic status, all have posed a major challenge to India's fight against COVID-19. Failure to contain the pandemic in India could have disastrous consequences with widespread cases and thousands of deaths that could easily overwhelm the health care infrastructure. Unabated spread of the pandemic could make India the next COVID-19 hotspot; hence the World Health Organization has recently stated that the “future of the pandemic will depend on how India handles it.” Here, we have summarized the present scenario of the pandemic in India and the myriad challenges being faced by the country in its fight against COVID-19.

Keywords

COVID-19, India, pandemic, social distancing, lockdown

Introduction

The novel coronavirus disease (COVID-19) has already affected over 6.9 million people, claiming more than 400,000 lives in over 200 nations all over the world. As on June 9, 2020, most of the cases were reported from the United States of America, Brazil, and Russia. While some nations (like China and South Korea) have successfully been able to flatten the pandemic curve, other nations are finding it difficult to achieve the same. In the absence of any definite therapy against COVID-19, the resilience of the health care infrastructure and health professionals is being put to test.

The novel coronavirus disease has also infiltrated into India; hitherto over 250,000 cases have been reported from the country. With a population of more than 1.3 billion people, India could become the new epicenter of COVID-19. Due to the remarkable population density, poor socioeconomic conditions and health care resources, the World Health Organization (WHO) recently stated that the “future of the pandemic will depend on how India handles it.” Here, we have presented a summary of the present scenario of COVID-19 in India, the country’s response and major challenges that lie in the road ahead.

Present Scenario of COVID-19 in India

The first case of COVID-19 in India was reported on January 30, 2020; the index patient was a student who had returned from Wuhan. Thereafter, only 2 more cases were reported in February. Subsequently, more cases came to the forefront in the month of March and there has been a surge in the number of cases since the latter half of April 2020 (Figure 1). As of June 9, 2020, according to the Ministry of Health and Family Welfare (MoHFW), a total of 266,598 confirmed COVID-19 cases have been reported from 32 states/union territories.2 Most of the cases have been reported from the states of Maharashtra, Tamil Nadu, Delhi, and Gujarat. Hitherto, the MoHFW have reported 7,471 deaths due to COVID-19, translating into a case-fatality rate of 2.8%.2

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An estimate released by the MoHFW on April 6, 2020 had revealed that out of the total number of confirmed cases, 76% were male. People younger than 40 years and older than 60 years accounted for 47% and 19% of cases, respectively. On the contrary, 63% of all the deaths had occurred in those aged 60 years and older. The case-fatality rates in 3 age groups, namely, <40 years, 40 to 60 years, and >60 years were 0.40%, 2.36%, and 8.89%, respectively. Moreover, 86% of the deaths were seen in people with underlying comorbidities, notably, diabetes mellitus, hypertension, kidney disease and/or cardiovascular disease. Although the overall mortality rates vary from one nation to another, being as low as 0.7% in Germany to as high as 10.8% in Italy, the fact that mortality due to COVID-19 increases with advancing age and presence of comorbidities is consistent across all countries. Another update by the Indian Council of Medical Research (ICMR) mentioned that 80% of the cases in India are either asymptomatic or mild. This is very similar to what has been reported from the largest Chinese series.

India’s Response to COVID-19

India has promptly responded to the novel threat. International borders have been shut and nationwide lockdown has been imposed since March 25. As per the Oxford COVID-19 Government Response Tracker, India’s response has been rated as one of the most stringent in the world, exceeding the United States, Germany, France, Italy, and the United Kingdom. In the absence of containment and timely lockdown, India would have had 820 000 cases by April 15. On the contrary, the reported number of COVID-19 cases in India as of April 15 was 11 438 (Figure 1), thereby preventing more than 800 000 cases. The ICMR had earlier predicted that strict social distancing would reduce the total number of cases by 62% and the peak number of cases by 89%. Similarly, Chatterjee et al., using a stochastic mathematical model had predicted that uninterrupted spread of COVID-19 would have led to 3 million cases by May 25; in reality there had been 138 845 cases as on May 25. The COVID-19 testing rates in India have markedly increased from 0.02/1000 people in late March to 3.28/1000 people as of June 7. As of June 9, 2020, 4 916 116 samples have been tested for COVID-19. In addition to the conventional real-time polymerase chain reaction (RT-PCR), the ICMR has advocated the use of other screening tests like TrueNat and Cartridge-Based Nucleic Acid Amplification Test (CBNAAT) using Cepheid Xpert Xpress SARS-CoV-2. Till date, 17 RT-PCR kits have been validated and approved for use in India by the ICMR. Rapid antibody test kits are also being used for surveillance purpose. Testing has been scaled up through 553 government and 231 private laboratories all over the country. The strategy for COVID-19 testing has been expanded so as to include all those with symptomatic influenza-like illness. The increased number of tests could have partly contributed to the recent upsurge in the number of cases. In addition, the Government has established over 600 COVID-19 dedicated facilities all over India; as a backup, the Indian Railways have converted 375 coaches into isolation wards. All efforts are being made to increase awareness about COVID-19 and its prevention via print, broadcast, and social media.

Challenges That Lie in the Road Ahead

The biggest challenge in India’s fight against COVID-19 is the population, with a population density that is almost 3 times that of China. The scenario is potentially worse in urban slums where the population density may exceed more than 250 000/km2, making social distancing impossible. As many as 140 million people in India are migrant daily-wage laborers; with imposition of nationwide lockdown, they are being forced to flock back to their villages without being able to abide by government advisories of social distancing. Unfortunately, another major hurdle in India’s struggle against COVID-19 has been the attitude and action of some of the citizens; there have been occasional reports of civilians hiding travel history in an attempt to escape quarantine and people participating in otherwise forbidden massive religious gatherings. Although the health care infrastructure has been urgently strengthened and nearly 2000 dedicated COVID-19 facilities have been amassed all over the country over a short period of time, the dearth of doctors cannot be made up overnight. India has just 0.8 doctors per 1000 population as against Italy’s 4.1, China’s 1.8, Spain’s 4.1, Iran’s 1.1 and the United States’ 2.6. In addition, the eastern states of West Bengal and Odisha have recently been hit by a super cyclone named Amphan that...
have wreaked havoc in the 2 states. People stranded homeless by the natural calamity have been rescued and placed in cyclone shelters where social distancing is practically not possible.21

Silver Lining in the Dark Clouds

Certain factors, although hypothetical, do favor a limited spread of COVID-19 pandemic in India, notably, the ambient tropical temperatures, malarial endemicity, universal BCG (Bacillus Calmette-Guérin) vaccination, and the age-old Indian tradition of greeting by namaste as opposed to handshake. Of late, COVID-19 kits are being produced in the country itself by more than one manufacturer, thereby, reducing the cost of testing. Testing rates, though much lower than the developed nations, are at par with the neighboring developing countries, like Thailand, Indonesia, Myanmar, Philippines, and Pakistan.10 In addition, the proportion of people ≥70 years of age is only 3.3% in India,22 as against 11.9% in China and 37.6% in Italy,23 thereby, one could expect overall mortality rate to be low in India. Last, India is the largest producer (and supplier) of hydroxychloroquine in the world,24 the drug that has been found to have some benefit in COVID-19.25 Although some recent observational studies have found no benefit of hydroxychloroquine,26,27 proper randomized controlled trials are lacking. However, a recent study conducted among health care workers in India has shown that prophylactic consumption of 4 or more maintenance doses of hydroxychloroquine was associated with a significant decline in the odds of getting infected along with a favorable side effect profile.28

Conclusions

India is presently witnessing a rapid surge in the number of COVID-19 cases. Although the nationwide lockdown has been able to decelerate the spread, the country’s ever-increasing population, remarkably high population density and poor socioeconomic conditions are major barriers in India’s battle against COVID-19. However, the overall low case-fatality rate is reassuring. The Government of India and the health care providers have been relentless in their efforts. The citizens must also help support the fight against the pandemic by adhering to government advisories of containment and social distancing.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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