COVID-19 or the coronavirus has emerged as a pandemic that has impacted lives of millions of people all around the world (Desai, 2021). It has practically destroyed the lives of innumerable people as they have lost their jobs and livelihood. In India as well the coronavirus pandemic has wreaked havoc and caused such chaos from which the people have not yet recovered. While the pandemic is still going, it is causing several complications and issues. The second wave of the virus in the country is a prime-evidence of this. Even though the government is taking numerous steps to control outbreak of the virus so that it does not influence so many lives, so far, its measures have not been very effective (Kar et. al, 2021). This has resulted in the lives of numerous people being turned 'upside down'. With the third wave also being expected to hit the country soon, the situation looks grimmer for the country and its people. This article presents the complications and issues that arose because of second wave of the pandemic and the measures that can be taken to safeguard against the inevitable third wave.

In April 2021, India was ranked as the 3rd leading country by the virus. The base for such ranking was the identified cases in Brazil and the USA. Second wave of the COVID-19 virus had started in the middle of March 2021 and on 9th April, the country recorded the highest number of cases in a day, amounting to 144,829 (Dutta, 2021). On this basis, it can be said that India was one of the worst affected countries in the world from the virus. The spread of this virus resulted in a large variety of issues and complications.

One of the key complications here was identifying the symptoms. It is said that the individuals infected with this deadly virus exhibited a wide variety of symptoms which ranged from mild and moderate to severe or critical (Jawhara, 2020). Due to this reason, it had become very difficult for the doctors, medical professionals, scientists and authorities to exactly pinpoint symptoms of the virus and provide a clear picture on the different ways in which it could be treated efficiently and effectively. It was found that the virus was rapidly changing its form, as new its new variants were being discovered on a regular basis. This also had a significant impact on treatment of the virus, because doctors, scientists and experts were not able to develop an exact, accurate and reliable treatment plan (Ali and Kunugi, 2021). This, then resulted in high mortality in the country, who essentially could have been saved if there was enough information available.

The classic symptoms of the virus were very much the same, i.e., fever (with or without the chills), shortness of breath, cough, body aches, headaches, sore throat and others (Meyerholz and Perlman, 2021). Since, the key symptoms of the virus were essentially the same, the authorities; the medical and scientific community could have prepared
for the virus better and therefore could have treated the individuals infected with the virus in a better and more effective manner. During second wave, the virus was at its deadliest and infectious, as the number of cases being recorded every day were more than the ones being recorded in the first wave itself.

Identification of new symptoms of the virus was one of the main complications during the second wave. Some of the new symptoms that came to light during this time were gastrointestinal tract infections, hearing loss, extreme lethargy and weakness, pink eye (conjunctivitis), dry mouth, diarrhoea, headache, skin rashes, unexplained fatigue (Singhal, 2020). Due to the presence of so many new symptoms for the virus, it had become difficult for the medical professionals and the scientific community to properly ascertain and develop an effective treatment for the virus.

Another complication that came to light during this time were the various types of fungus like the white fungus, black fungus, yellow fungus and others. In addition to this, age bracket for the people infected with the virus also changed (Kakol, 2020). While in the first wave, mostly senior citizens were at risk of being infected with the virus, this changed during the second wave. This was due to the fact that by the time second wave arrived, majority of the senior citizens had been infected; and therefore, adults and young adults were at the most risk of being infected with the virus. Moreover, the emergence of Delta variant of the virus, not only did it become more dangerous, but it also stated affecting adults, many of whom also lost their lives. During this time as well, the kids were not safe as they experienced and showed mild symptoms of the virus. Rise in the post-COVID complications was also a major issue during second wave of the virus (Cheke and Cheke, 2020).

Here the symptoms of the virus also changed a little, as they were determined to be prolonged fatigue, brain fog and neuromuscular complications that lingered on for months even after the RT-PCR test.

Now, even though the second wave has officially ended in the country, it is being expected that the third wave is soon going to hit the country and cause significant havoc. In order to prevent such a situation, experts have suggested that the government and the people need to learn lessons from the first and second waves of the virus (Mathur, 2020). With the arrival of the Delta Plus Variant, this seems to be the most obvious and a very effective way of treating people infected with the virus. Even though the measures for prevention against the virus, more or less remain the same, they have been reclassified to be named as ‘behavioural vaccine’. This entails that the people need to take precautions in terms of wearing masks, maintaining safe distance of six feet from one another, regularly washing and sanitising hands. In this regard, behaviour is also being touted as an effective protective measure against the virus (Huda et al, 2020).

Another highly effective way to protect against the virus, in medical terms, is to take the vaccines (either one or both, depending on the vaccine being taken). It is being said that the vaccines should be prioritised in the whole country, as they singularly, are the most effective means through which the third wave can be controlled and minimised (Khandelwal and Kumar, 2020). Avoiding any non-essential travel can also be an effective way for safeguarding during the third wave.

Targeted containment is also being considered as a highly useful and effective way for protecting against the third wave (Vijai and Joyce, 2020). This entails using the mantra of ‘test, track and treat’, thereby providing the medical and scientific community with ample amount of information to develop the right medicine or treatment plan for the virus. It should be noted that the government and its agencies need to actually implement this, as opposed to the fact that this was just some slogans that remained on paper during the first and second waves. Authorities should also focus on ensuring that COVID fatigue does not creep in the bodies and institutions working on the issue of the COVID-19 pandemic (Dutta, 2021). Along with this, it can also be suggested that research and scientific exploration should also be encouraged and promoted to safeguard against the third wave.

Conflict of Interest

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References

1. Desai S. Covid-19 second wave: Docs reveal new symptoms to watch out for. Times of India; 2021. Available from: https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/covid-19-second-wave-new-symptoms-to-watch-out-for/articleshow/82425679.cms>.

2. Kar SK, Ransing R, Arafat SMY, Menon V. Second wave of COVID-19 pandemic in India: Barriers to effective governmental response. *EClinicalMedicine*. 2021;36:100915. doi:10.1016/j.eclinm.2021.100915.

3. Dutta P. How India can prevent third wave of Covid-19 pandemic. India Today. [Accessed on 9th August 2021]; 2021. Available from: https://www.indiatoday.in/coronavirus-outbreak/story/how-india-can-prevent-third-wave-of-covid-19.

4. Jawhara S. Could intravenous immunoglobin collected from recovered coronavirus patients protect against COVID-19 and strengthen the immune system of new patients? *Int J Mol Sci*. 2020;21(7):2272. doi:10.3390/ijms21072272.

5. Ali AM, Kunugi H. Propolis, bee honey, and their components protect against Coronavirus Disease 2019 (COVID-19): A review of in silico, in vitro, and clinical studies. *Molecules*. 2021;26(5):1232. doi:10.3390/molecules26051232.

6. Meyerholz DK, Perlman S. Does common cold coronavirus infection protect against severe SARS-CoV-2 disease? *J Clin Investig*. 2021;131(1).

10.3390/can-prevent-third-wave-of-covid-19.
7. Singhal T. A review of coronavirus disease-2019 (COVID-19). Indian J Pediatr. 2020;87(4):281–6. [DOI: 10.1007/s12098-019-4324-5]

8. Kakol M. Susceptibility of Southwestern American Indian Tribes to Coronavirus Disease 2019 (COVID-19). J Rural Health. 2020;[DOI: 10.1111/jrkh.12451]

9. Cheke RS, Cheke D. Coronavirus: Hotspot on coronavirus disease 2019 in India. Indian J Med Sci. 2020;72(1):29–34. [DOI: 10.25259/IJMS_33_2020]

10. Mathur R. Ethics preparedness for infectious disease outbreaks research in India: A case for novel coronavirus disease 2019. Indian J Med Res. 2020;151(2-3):124–31.

11. Huda MN, Islam R, Qureshi MO, Pillai S, Syeda, Hossain SZ, et al. Rumour and social stigma as barriers to the prevention of coronavirus disease (COVID-19): What solutions to consider. Global Biosecur. 2020;1(4). [DOI: 10.31646/gbio.78]

12. Khandelwal A, Kumar A, Agrawal A. An outbreak of coronavirus (COVID-19) epidemic in India: challenges and preventions. J Infect Dis Ther. 2020;.

13. Vijai C, Joyce D. Novel Coronavirus (COVID-19) Knowledge and Awareness: A Survey of Thiruvallur District, Tamilnadu. Shanlas Int J Manag. 2020;8(1):69–76.

Author biography

Aditi Mehta, Senior Resident

Shefali Mehta, Assistant Professor
Ravindra Nath Tagore Medical College, Udaipur, Rajasthan

Vishwa Mehta, MBBS 3rd Year

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