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Internal Medicine: Open Access

Opinion Article

Differentiation of First and Second Wave of COVID-19 Infection Pattern

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DESCRIPTION

During the 2020 pandemic many countries have seen a two-wave pattern of reported cases of COVID-19, with the first wave in the spring followed by the current second wave in late summer and autumn. The first period, between 15th March 2020 and 30th October 2020, corresponds to the total first wave and the second, between 1st November 2020 and 30th June 2021, corresponds to part of the second wave. The COVID-19, which has been booming in recent times, is spreading like a tsunami across the globe. As of March 16th, 2022, COVID-19 cases had crossed 16 million, with 200,000 deaths. The second wave is developing at an extraordinary speed compared to the first wave. There may be several reasons for the increase in the number of cases in the second wave. It has been observed that the mutated virus has a more effective transmission capacity and its incubation period is also shorter. There is widespread disregard for 'COVID appropriate behaviors or CAB by the public and the quality of the masks used varies greatly. N-95 masks are not the most popular masks in India, due to their high cost and the majority of people use domestic masks made of cloth or repeatedly use the same and worn masks.

The mid-October 2020 to cover two equal periods of three and a half months. More patients were admitted during the second wave, they were younger and there were fewer deaths. The reasons for the clear differences between the two periods are not yet known although it has been suggested that a new variant of SARSCoV-2 emerged in early summer, a variant that was linked to outbreaks among young agricultural workers in the parts of the country.

The most common signs and symptoms of the two waves are fever, shortness of breath, pneumonia and cough. Cardiovascular diseases, type 2 diabetes mellitus and chronic neurological diseases are the most relevant comorbidities. Patients coming from the second wave are different from the first wave; they often exhibit vomiting, asthenia, abdominal pain, rhinorrhea or severe renal failure and less often a high frequency of coughing or chill and tiredness. There is no significant difference in the frequency of chronic diseases.

Multiple regression analysis has shown that the presence of aging and fever, respiratory disease, acute respiratory distress syndrome, diabetes, and cancer are independently associated with higher mortality in the first wave, while age, gender, and acute respiratory distress syndrome and chronic respiratory distress syndrome and neurological diseases are associated with mortality in the second. This may be a reflection of better management of cancer or diabetes patients. On the other hand, the higher an average age of those who die in this second wave may be associated with neurological diseases. The decrease in the age of the patients then resulted in a decrease in the case fatality rate in that those patients who died were on average 5 years older than the victims of the first wave. Moreover, fewer patients required respiratory assistance via invasive mechanical ventilation methods.

A new and distinctive feature of the occurrence of COVID-19 in this second wave in our population is that it occurs more frequently in infants, children, and pregnant women who have gone to the hospital to give birth or postpartum. The vast majority of these patients did not exhibit severe symptoms and did not need to be hospitalized for more than 4 days. No deaths in children under 9, pregnant women or postpartum women. The main symptom of children was fever (19, 90.5% in 21 cases), pregnant and postpartum women (13 and 17 cases, respectively) were asymptomatic and discharged immediately.

Future prospects are difficult to predict. It is hoped that COVID-19 will not disappear in the short or medium term. New variants of the virus may appear, the vaccination process will continue for 2022 or more years, until a sufficiently high percentage of the population is protected, and maintaining strict lockdowns for long periods of time will be difficult to cope with economically and socially and psychological perspectives. Currently, the whole world is in the middle of the second or probably third wave. The most important conclusion is that we must be vigilant in the consistent study of the symptoms of the disease, be able to quickly modify treatments if necessary and transmit results immediately to the scientific community and society as soon as possible for coordination and global action.

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Received: 01-Mar-2022, Manuscript No. IME-22-16313; **Editor assigned:** 03-Mar-2022, PreQC No. IME-22-16313 (PQ); **Reviewed:** 17-Mar-2022, QC No. IME-22-16313; **Revised:** 22-Mar-2022, Manuscript No. IME-22-16313 (R); **Published:** 29-Mar-2022, DOI: 10.35248/2165-8048.22.12.004

Citation: Webster R (2022) Differentiation of First and Second Wave of COVID-19 Infection Pattern. Intern Med. S10:004.