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Viral load in second wave Covid patients higher than in first: Study

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MUMBAI: A city study has found a 100-fold increase in the amount of SARS-CoV-2 virus being expelled by Covid-19 patients during the second wave as compared to the first wave.

The study, jointly done by the BMC and the Foundation of Medical Research, underlined that the Delta variant of the Covid-causing SARS-CoV-2 was highly infectious.

“We studied 75 Covid patients, some of whom were vaccinated, and found that compared to 2020 (the first wave), there was a two-fold increase in the proportion of people expelling virus in their breath and a 100-fold increase in the amount of virus per patient,” said Dr Nerges Mistry of FMR.

The study was a part of the paper presentations made at the ongoing 52nd Union World Conference on Lung Health.

The authors found that only 42% of the patients during the first wave could expel the virus (on to a face mask) while the corresponding number during the second wave was 91%.

All the patients studied during the second wave were affected by the Delta variant. Samples were collected from patients within 36 hours of their diagnosis. Each participant was given a modified N95 mask that was attached with a gelatin membrane on the inner surface of the mask for 30 minutes.

The participants were asked to carry on with their activities for the first 20 minutes and then asked to do vocal tasks (such as reading, coughing) in the last 10 minutes. The gelatin film was removed and studied.

“We found the viral load among the patients was double of the load among first wave patients,” said chest physician Dr Vikas Oswal, who was associated with the study. He said the second wave was less lethal in terms of deaths, but each patient had high low-CT value and high viral load.

Dr Mistry said some of the vaccinated patients expelled a lesser volume of virus. “However, there was only a marginal reduction in the risk of transmission from vaccinated individuals,” said the poster.

The researchers said the study underlined the need for masking in the foreseeable future. “Such studies are important for scientists and vaccine manufacturers. The future generation Covid vaccines could focus on ways to prevent expulsion of viruses into the mask or arrest the mode of transmission,” she added.

A press note released by FMR quoted BMC executive health officer Dr Mangala Gomare as saying, “Surveillance of Covid-19 is on top priority for MCGM now. Such studies help identify factors affecting the spread of the virus and thereby inform the action plan for its control.”