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Vaccines protect from severe illness against COVID-19 variants: Apollo Hospital study

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The study analysed nasopharyngeal samples for genome sequencing, in collaboration with the NCDC

With several reported cases of infections after partial or complete vaccination, occurring in a small percentage of people, concerns have been raised on the efficacy of vaccination against the mutated variants of COVID-19. The infections occurring two weeks after the full vaccination have been referred to as ‘Break Through Infections’ or BTI.

In a study conducted by Indraprastha Apollo Hospitals, vaccines were found to be effective in combating mutated variants and protect the vaccinated from severe illness, hospitalisation, or death.

The study was conducted on 69 symptomatic health care workers working at the hospital, who tested positive for COVID-19 after their vaccination with the Covishield vaccine, during the first 100 days of the vaccination drive earlier this year. The study analysed nasopharyngeal samples for genome sequencing, in collaboration with the National Centre for Disease Control (NCDC).

Genome Sequencing is the key test to identify the nature of the virus and the variants that may emerge. Currently, this facility is available in only ten select government organisations, but such testing facilities are now being increased shortly by the Government of India.

According to Dr Anupam Sibal, Group Medical Director and Senior Paediatric Gastroenterologist, Apollo Hospitals, “Amongst 69 people, 51 were fully vaccinated with two doses (73.91 per cent) and the remaining 18 (26.09 per cent) were partially immunised with a single dose, before acquiring the infection. The predominant infections occurred from B.1.617.2 lineage (47.83 per cent), followed by B.1 and B.1.1.7 strains. There were only two hospital admissions (2.89 per cent) for minor symptoms, but no ICU admissions and deaths, from this group. These findings are significant because more than half of the cohort were found infected with the Variant of Concern (VoC) and still escaped from the severe illness, which could have been a severe event for them without vaccination coverage.”

VoC are mutated versions of a virus that may spread more rapidly or may cause severe illness and hence notified for global monitoring by the World Health Organization and other multilateral health agencies.

One of the key authors of this study, Dr Raju Vaishya, Sr Consultant, Orthopaedics, Indraprastha Apollo Hospitals said, “We noticed that the post-vaccination SARS-COV-2 infections were seen only in a small subset of our healthcare workers. The majority of these infections were minor, despite being caused by the VoC. Since the immunity in an individual takes some time after the vaccination, therefore it is essential for the vaccinated individual to be extra careful at least two weeks after the second dose of vaccination and even further, by taking universal safety precautions like maintaining social distancing, using face masks, and hand sanitation.”

This study concluded that the prior vaccination in the healthcare workers offered clear protection from severe disease due to variants requiring hospital and ICU admissions and deaths.