B.1.1.7 SARS-CoV-2 variant more transmissible but not linked to more severe illness, death

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(HealthDay)—The B.1.1.7 variant of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is not associated with more severe illness or death but leads to higher viral load and is associated with increased R_1, according to two studies published online April 12 in *The Lancet Infectious Diseases* and *The Lancet Public Health*.

Dan Frampton, Ph.D., from University College London, and colleagues sequenced and analyzed samples from hospitalized patients for the presence of the B.1.1.7 variant of concern. The researchers found that 58 percent of the 341 patients with samples that could be sequenced had B.1.1.7 infection. In unadjusted and adjusted analyses, there was no evidence of a correlation between severe disease and death and lineage. Viral load by proxy was higher in B.1.1.7 samples than in non-B.1.1.7 samples.

Mark S. Graham, Ph.D., from King's College London, and colleagues examined the association between the SARS-CoV-2 B.1.1.7 variant and reported symptoms, disease course, rates of reinfection, and transmissibility among users of the COVID Symptom Study app with a positive COVID-19 test between Sept. 28 and Dec. 27, 2020, when the prevalence of B.1.1.7 increased. The researchers observed no change in reported symptoms or disease duration associated with B.1.1.7. Possible reinfections were identified during this time for 0.7 percent of 36,509 app users who reported a positive test before Oct. 1, 2020, with no evidence for increased frequency of reinfection with the B.1.1.7 variant. Relative to preexisting variants, there was a multiplicative increase in the R_1 of B.1.1.7 by a factor of 1.35.

"This study adds to the consensus that B.1.1.7 has increased transmissibility, which has contributed in large part to the sharp rise in cases in the U.K. over the study period and beyond," write the authors of an accompanying editorial.

One author from the Frampton study disclosed financial ties to the pharmaceutical and medical device industries. Several authors from the Graham study disclosed ties to Zoe Global, which partially funded the study.

More information: Abstract/Full Text - Frampton
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