A Majority of People With HIV Have Asymptomatic COVID

The proportion without symptoms was higher than previously seen in many studies of both people with HIV and the general population.

April 20, 2022 By Liz Highleyman

More than half of people living with HIV who acquire SARS-CoV-2, the coronavirus that causes COVID-19, have asymptomatic illness, according to study results presented at the Conference on Retroviruses and Opportunistic Infections (CROI 2022). This suggests that people with well-controlled HIV have COVID-19 outcomes similar to those of HIV-negative people.

In the early days of the COVID-19 pandemic, small studies and anecdotal reports suggested people living with HIV were not more likely to test positive for SARS-CoV-2 or to develop severe COVID-19 (though the hypothesis that antiretrovirals such as tenofovir might have a protective effect was never confirmed). Later studies, however, suggested that HIV-positive people, especially those with advanced HIV, are at increased risk. Likewise, while most people with HIV respond well to COVID-19 vaccines, those with a low CD4 count or a detectable viral load don't fare as well.

To shed more light on this issue, Turner Overton, MD, of the University of Alabama at Birmingham, Isabelle Weir, PhD, of the Harvard T.H. Chan School of Public Health, and colleagues looked at COVID-19 outcomes among HIV-positive people in the REPRIEVE study.

The main aim of the REPRIEVE trial is to assess the effect of a cholesterol-lowering statin medication on cardiovascular disease outcomes among HIV-positive people ages 40 to 75. So far, more than 7,700 participants from around the world have joined the study. While full results are not expected for another year, the study is already yielding useful information.

Starting in April 2020, data about COVID-19 were collected as part of routine trial visits every four months. The researchers analyzed data about SARS-CoV-2 diagnoses and COVID-19 symptoms between May 2020 and February 2021. For this study, COVID-19 was defined as either a clinical diagnosis or the presence of SARS-CoV-2 antibodies in blood samples. Although COVID-19 vaccine status was not reported, very few people would have had the opportunity to be vaccinated so early.

This analysis included 2,464 REPRIEVE participants. About two thirds were men, the median age was 53 years and 47% were Black. Approximately half lived in high-income countries such as the

United States, about a quarter lived in Latin America and more than 10% each lived in sub-Saharan Africa or East/Southeast Asia. Almost all were on antiretroviral treatment with an undetectable HIV viral load, and the media CD4 count was high, at 649 cells.

Within this group, 318 people (13%) had COVID-19, including 260 with SARS-CoV-2 antibodies and 58 with a clinical diagnosis. Of these, 304 completed a symptom questionnaire.

As Weir reported at CROI, with results also published in the Journal of Acquired Immune Deficiency Syndrome, 121 participants (40%) reported at least one COVID-associated symptom within two weeks after a positive SARS-CoV-2 test or had severe (Grade 2 of higher) COVID-19. But a larger proportion, 183 people (60%), were asymptomatic.

The most commonly reported symptoms were cough (42%), muscle pain (41%), headache (40%), fever (29%), chills (28%), runny nose (28%), shortness of breath (25%), sore throat (23%), loss of the sense of smell (22%) or taste (22%) and chest tightness (20%). Weir noted that some people without COVID-19 also reported symptoms, but the frequency was lower in that group.

People with COVID-19 symptoms were more likely to live in high-income countries. After adjusting for geographical region and date of blood sample collection, Black people were more likely to have asymptomatic COVID-19. This was also true for people ages 60 or older—perhaps surprising, as COVID-19 is known to be more severe in older people.

In terms of comorbidities, people who developed COVID-19 symptoms were more likely to have obesity, metabolic syndrome and low HDL (good cholesterol) levels, though they had a lower average cardiovascular disease risk score.

HIV viral suppression and CD4 counts were similar in people with and without COVID-19 symptoms, but a very small proportion of the study population had a detectable viral load or a low CD4 count.

Weir noted that the proportion of people with asymptomatic COVID-19 in this analysis is higher than that seen in many previous studies of both people with HIV and the general population. But general population rates have varied widely—from around 20% to over 80%—reflecting differences in testing strategies and how asymptomatic infection is defined.

A limitation of the analysis is that the study ended in February 2021, when few, if any, participants had received COVID-19 vaccines and before the emergence of new SARS-CoV-2 variants, including the now-dominant omicron strain, which some research suggests may be milder.

“HIV clinicians must remain vigilant to assure that our patients have knowledge about COVID-19 disease, including risks of asymptomatic disease, and the appropriate mitigation strategies in place,” the researchers concluded.

Click here to read the study abstract.
Click here for more reports from CROI 2022.

Click her for more news about COVID-19.
