MedicalXpress

Studies provide latest 'real world' evidence on effectiveness of COVID-19 treatments

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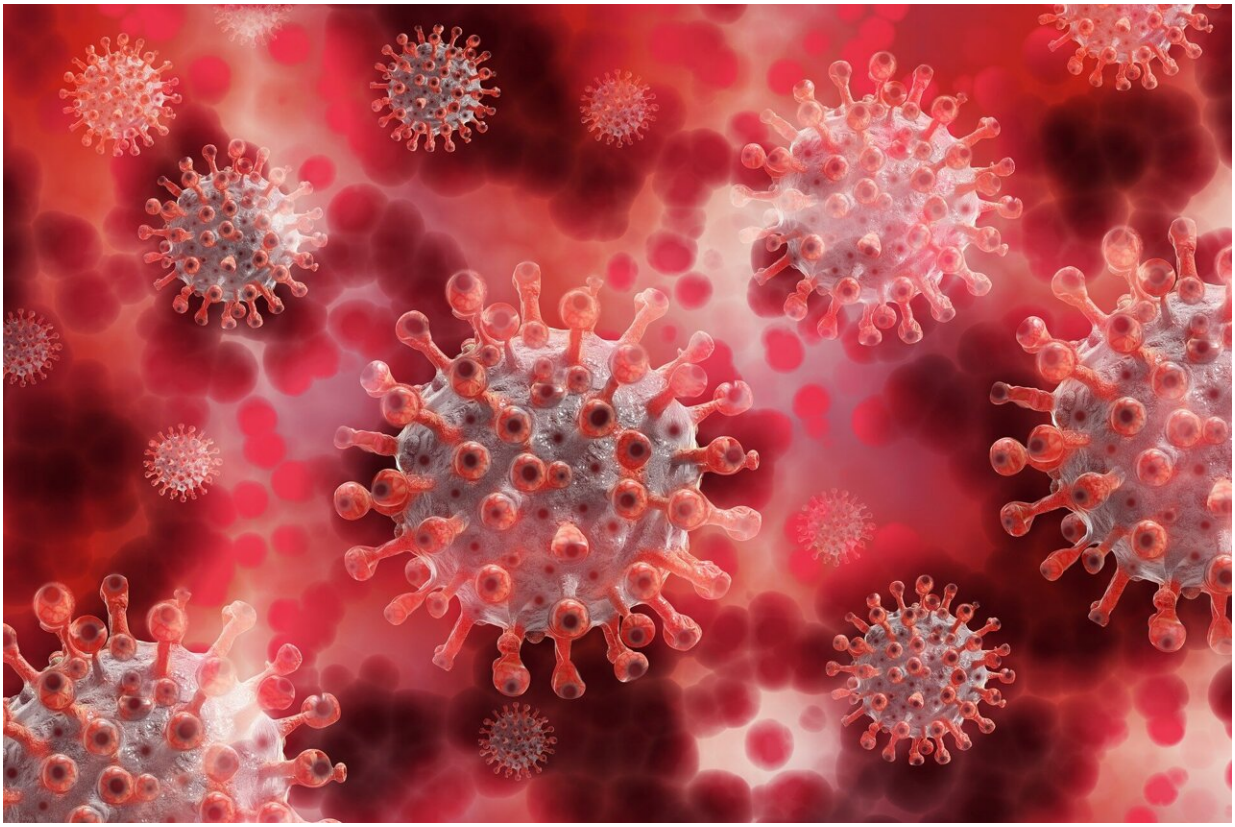

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Two studies published by *The BMJ* today provide up to date evidence on the effectiveness of both currently licensed and possible COVID-19 treatments under everyday ("real world") conditions, helping to shed

more light on whether these drugs can prevent people from becoming seriously ill.

The first is an observational study carried out in England between December 2021 and February 2022. Researchers used hospital records and death certificates for high-risk adults with COVID-19 (average age 52) to compare the effectiveness of the antibody treatment sotrovimab with the antiviral drug molnupiravir.

The researchers found that those who received sotrovimab were at a substantially lower (46%) risk of severe COVID-19 outcomes than those receiving molnupiravir, within 28 days of treatment.

Results were consistent when restricted to fully vaccinated people and also after further analysis of patients treated between February and May 2022 when the BA.2 omicron variant of COVID-19 was dominant in England, suggesting that they are relevant to current clinical care.

There is currently ongoing discussion about the effectiveness of different antibody and antiviral treatments for COVID-19 with recent World Health Organization guidance recommending against use of sotrovimab. However, both drugs are currently available for use in England.

The researchers say that their "real-world findings within a time period when both drugs were frequently prescribed and when new variants of COVID-19 were circulating provide evidence of current effectiveness of sotrovimab over molnupiravir."

Their analysis also "supports the conclusion that sotrovimab remains beneficial in fully vaccinated patients, which now represent the majority of the COVID-19 patient population in many settings," they add.

The second is a randomized controlled trial involving 787 patients (778 from India and nine from Australia) with an average age of 49 years, admitted to hospital from May 2020 to November 2021. Included patients had predominantly mild disease, although the researchers aimed to recruit patients at risk of severe COVID.

Half received angiotensin receptor blockers or ARBs (drugs widely used to treat high blood pressure and heart disease) and the other half (controls) received a placebo for 28 days.

A standard dose of the ARB drug telmisartan (starting dose 40 mg/d) was used only in India while the type and dose of ARB was at the discretion of the treating physicians in Australia.

These particular drugs were chosen because they work by regulating the same angiotensin protein as coronavirus uses to enter the body, and in the laboratory have shown potential protectivity against severe effects of coronaviruses.

However, after 14 days of treatment, the researchers found no meaningful difference in illness severity between the two groups. These findings should help to inform clinical practice. The lack of effect provides reassurance that it is safe to use these protective agents in people indicated, with or without COVID-19.

Both studies have some important limitations. For instance, in the observational study, some misclassification about cause of death or hospital admission may have occurred, and the researchers can't rule out the possibility that differences in initial severity of COVID-19 or other unmeasured factors between treatment groups may have influenced their results.

And in the randomized controlled trial, the researchers were unable to

source placebo in Australia, meaning participants and treating clinicians knew they were taking an active drug. Participants were also treated with a relatively low drug dose, so the effect of higher doses remains unknown.

Nevertheless, key strengths included the scale, level of detail and completeness of the underlying data in the observational study, and good adherence to study treatment and an adaptive design that allowed the study question to be answered most quickly in the randomized trial.

More information: Comparative effectiveness of sotrovimab and molnupiravir for prevention of severe COVID-19 outcomes in non-hospitalised patients: observational cohort study using the OpenSAFELY platform, *The BMJ* (2022). DOI: 10.1136/bmj-2022-071932

Angiotensin receptor blockers for the treatment of covid-19: pragmatic, adaptive, multicentre, phase 3, randomised controlled trial, *The BMJ* (2022). doi: 10.1136/bmj-2022-072175

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