Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/clinicians-roundtable/exploring-new-onset-type-2-diabetes-after-covid-19/48851/

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

Exploring the Risk of Type 2 Diabetes Following SARS-CoV-2 Infection

Announcer:
You're listening to *Clinician's Roundtable* on ReachMD. On this episode, Dr. Carolyn Bramante will share findings from the COVID-OUT study exploring risk reduction of new-onset type 2 diabetes following SARS-CoV-2 infection. Dr Bramante is an Assistant Professor of Medicine in the Division of General Internal Medicine and an Assistant Professor in the Department of Pediatrics at University of Minnesota. Let's hear from her now.

Dr. Bramante:
The COVID-OUT trial was a randomized trial testing metformin versus exact matching placebo as outpatient treatment for acute SARS-CoV-2 infection. And the rationale was that early on in the pandemic, there were several observational analyses showing that individuals with prevalent metformin use, compared to individuals who weren't taking metformin, had less severe COVID-19 outcomes. These studies were done primarily in individuals with type 2 diabetes, the FDA-approved indication for metformin. And in addition to these observational clinical outcomes, there were preclinical studies as well as a body of literature about metformin having actions that are relevant to SARS-CoV-2.

So metformin activates AMPK, and those actions have favorable immunometabolic actions downstream to counteract the harmful immunometabolic actions caused by the virus. The primary acute outcome was severe COVID by day 14, and this was defined as one low reading on a home oximeter or an ER visit, hospitalization, or death due to COVID-19. The primary outcome was not significant. It was in the direction of benefit, but we now know that one low reading on a home oximeter is not a good way to define severe COVID-19.

Pre-specified outcomes included sequentially removing components least associated with severe disease. So when you looked at ED visit, hospitalization, or death by day 14 and by day 28, those outcomes had a large effect—about a 40 to 50 percent reduction in risk of those outcomes—and they were precise, with confidence intervals less than one. The primary outcome for the long-term follow-up was asking participants, "Has a medical doctor told you that you have long COVID? Yes or no?" And then for participants who responded yes, we obtained those medical records. And so the long-term outcome was clinician-diagnosed long COVID, and that was obtained through monthly surveys sent for 10 months after to participants enrolled in the study. In those surveys, we also asked, "Have you been diagnosed with any new conditions?" For example, diabetes was a selectable option. 22 individuals had responded saying that they had been diagnosed with diabetes in the 10 months after that infection, 8 in the metformin group, 1.4% percent, and 14 in the placebo group, 2.5% percent. So this is about a 1 percent absolute risk reduction, and with a hazard ratio similar to the hazard ratios for the acute and long COVID outcomes.

This diabetes outcome is not precise, so there were not very many events of new diabetes. But it's reassuring to see a consistent direction of effect and magnitude of effect on this important outcome of newly diagnosed diabetes.

Announcer:
That was Dr. Carolyn Bramante talking about key findings from the COVID-OUT study. To access this and other episodes in our series, visit *Clinician's Roundtable* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!