Summary for Patients: Postexposure Hydroxychloroquine Prophylaxis to Prevent SARS-CoV-2 Infection

From: Barnabas RV, Brown ER, Bershteyn A, et al; Hydroxychloroquine COVID-19 PEP Study Team. Hydroxychloroquine as postexposure prophylaxis to prevent severe acute respiratory syndrome coronavirus 2 infection. A randomized trial. Ann Intern Med. 8 December 2020. [Epub ahead of print]. doi:10.7326/M20-6519

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What is the problem and what is known about it so far?

Hydroxychloroquine is a medication that has been used for many years to treat malaria and some rheumatologic conditions. Because laboratory data suggested hydroxychloroquine might be active against SARS-CoV-2, the virus that causes COVID-19, it was used early in the pandemic to treat patients with COVID-19. Since then, studies have shown that hydroxychloroquine is not effective treatment for COVID-19. However, some believe that it might have a role in preventing SARS-CoV-2 infection in people after exposure to someone with known infection.

Why did the researchers do this particular study?

To see whether hydroxychloroquine prevented the development of SARS-CoV-2 infection in people exposed to someone diagnosed with SARS-CoV-2 infection.

Who was studied?

829 people who were exposed within the past 96 hours to someone in their household diagnosed with SARS-CoV-2 infection.

How was the study done?

Between March and August 2020, 671 households were randomized: 337 households (407 participants) to the hydroxychloroquine group and 334 households (422 participants) to the control group. Participants in the hydroxychloroquine group took 400 mg of the drug daily for 3 days, followed by 200 mg daily for 11 days. Participants in the control households received 500 mg of ascorbic acid (vitamin C) for 3 days, followed by 250 mg daily for 11 days. All participants swabbed the inside of their noses daily and sent the specimens for SARS-CoV-2 tests. Participants who were positive at the beginning of the study were not included in the analysis.

What did the researchers find?

The risk for SARS-CoV-2 infection within households was high: 10% of participants were infected at the start of the study, and an additional 14% were infected over the 2 weeks of study follow-up. There was no statistically significant difference in the development of SARS-CoV-2 infection between the hydroxychloroquine and control group. However, side effects, such as gastrointestinal symptoms and rash, were more frequent in the hydroxychloroquine group.

What were the limitations of the study?

There was some delay (about 2 days) between exposure and the first dose of hydroxychloroquine or ascorbic acid.

What are the implications of the study?

Hydroxychloroquine should not be used to prevent SARS-CoV-2 infection after exposure to a close contact with infection.

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