

HCQ has no significant impact on heart rhythm in lupus patients, even those with CKD

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New research shows that adults with lupus who take the antimalarial drug, hydroxychloroquine, do not have any differences in their corrected

QT (QTc) intervals, an electrocardiogram (EKG) measurement of the heart's electrical signals, even if they have chronic kidney disease (CKD), a complication of lupus that can be associated with increased levels of the medication. The study was presented at ACR Convergence, the American College Rheumatology's annual meeting (ABSTRACT #1844).

Systemic lupus erythematosus (SLE or lupus) is a chronic (long-term) disease that causes systemic inflammation which affects multiple organs. In addition to affecting the skin and joints, it can affect other organs in the body such as the kidneys, the tissue lining the lungs, [heart](#), and brain. Many patients experience fatigue, weight loss, and fever.

Current lupus treatment recommendations include hydroxychloroquine for all patients. It is well tolerated and considered low risk for side effects. The drug can produce a delay in the heart's electrical conduction system, but prior studies found no association with symptoms or a serious risk of abnormal heart rhythm. However, one concern is that in [lupus patients](#) with decreased kidney function, higher levels of hydroxychloroquine may be more likely to affect the heart.

One way to assess the heart's electrical signaling is the QTc interval measurement on an EKG. It measures how long it takes the heart to contract and relax on each heartbeat. People with prolonged QT intervals are at higher risk for heart arrhythmias, which are irregular heartbeats, that could be life-threatening. This new study compared QTc intervals in adults with lupus based on their use of hydroxychloroquine, and if they did or did not have [chronic kidney disease](#).

"Hydroxychloroquine use increased during the COVID-19 pandemic, with some contradictory reports regarding its cardiac safety," says the study's co-author, H. Michael Belmont, MD, professor of medicine, NYU Grossman School of Medicine and co-director of NYU Langone

Health's Lupus Center. "It is important to provide reassurance to lupus patients who need to take this medication regularly and for long periods that it is generally safe and without consequential risk for serious heart toxicity."

There were 194 patients with lupus included in the study, which used retrospective data from the electronic medical records database at NYU Langone Health from March 2012 through May 2020. The researchers collected data on patients' EKG results, including the QTc intervals from their first and last EKGs. Prolonged QTc intervals are more than 450 milliseconds for males and more than 470 milliseconds for females. Severe prolongation is more than 500 milliseconds. The researchers also looked at patients' creatinine levels and demographics, and whether or not they had CKD.

Only 90 people in the study had taken at least one EKG during this period, and of these, 91% were female, 32.2% were African American, 6.6% were Asian, 28.8% were white, 20% were Hispanic, and 2.2% were of other races. Seventy-five were taking hydroxychloroquine, while 15 were not on the drug. Eight out of 75 patients who were on hydroxychloroquine had prolonged QTc intervals, and only one of the 15 people not taking the drug had a prolonged interval. There was no significant difference in mean QTc intervals based on hydroxychloroquine treatment.

What about lupus patients with CKD? The 23 patients with chronic kidney disease in the study did not have any significant differences in their mean QTc intervals either, whether or not they were taking hydroxychloroquine. None of these patients had any documented tachyarrhythmia, or more rapid than normal heart rate, or Torsades de pointes (TdP), a potentially life-threatening arrhythmia.

"The findings of this study can provide some comfort to lupus patients

including those with CKD that [hydroxychloroquine](#) is not likely to produce serious heart arrhythmias," says Dr. Belmont. "Future studies could investigate these observations in even larger numbers of patients and include a prospective examination of QTc intervals in patients before and after starting the medication to provide even further assurance of drug safety."

More information: acrabstracts.org/abstract/hydroxychloroquine-has-no-significant-impact-on-heart-rhythm-in-lupus-patients/

Provided by American College of Rheumatology

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