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Baseline ECG and Cardiovascular Outcomes in People With HIV: Insights From REPRIEVE

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Background

The Randomized Trial to Prevent Vascular Events in HIV (REPRIEVE) trial led to changes in multiple clinical guidelines advising about statin medication for people with HIV (PWH). Abnormalities in electrocardiography scans (ECG, looking at the electrical conduction patterns of the heart) are common among PWH, but little is known about their connection with major adverse cardiovascular events, like heart attacks or strokes.

The risk of heart disease is increased approximately 2 times among PWH, as compared to people without HIV. Accurately estimating the risk of heart disease is important for appropriately advising about useful heart disease prevention strategies, including statin therapy.

Goals of the Study

The goal of this study was to examine whether ECG abnormalities found at the study entry are associated with increased risk of heart attacks or strokes in the REPRIEVE population.

REPRIEVE enrolled PWH between ages 40-75 with low-to-moderate traditional heart disease risk, randomized these participants to a statin medication called pitavastatin or to placebo (a pill that contains no medication), and followed these participants for, on average, 5 years, to see if they developed heart disease events like a heart attack or stroke. Main findings from REPRIEVE were that [statin therapy reduced heart disease events among PWH by 36%](#), prompting guideline changes recommending statin use in PWH.

➤ The participants:

- 7,719 REPRIEVE participants with ECG scans available
 - Median age at enrollment: 50 years
 - 2,408 (31%) women and 5,311 (69%) men
 - 49% had one or more ECG abnormalities, with 3% classified as major abnormalities

➤ The findings:

- Over a median of following patients for 5.6 years, a major ECG abnormality was associated with a 2.42-fold increased risk of heart attacks or strokes
- Minor abnormalities were not associated with higher risk of heart attacks or strokes
- Specific ECG abnormalities associated with heart attacks and strokes were chamber enlargement (where the heart chamber is bigger than normal) and infarct/ischemia pattern (reduced blood flow in the heart)

In Summary: Among PWH in REPRIEVE, electrocardiographic abnormalities were common, but major electrocardiographic abnormalities were rare. Routine electrocardiographic screening is unlikely to improve the prediction of future cardiovascular events in this primary prevention population with low to moderate cardiovascular risk.

REPRIEVE Trial Website: reprivetrial.org

The findings shared in this summary are from the REPRIEVE population at a specific point in time. These findings are descriptive and not intended to change clinical care. If you have questions about what you've read, please talk to members of the REPRIEVE study team at your local site or a health care provider