

# PORTABLE SINGLE-LEAD EKG KARDIA MOBILE DEVICE IS ACCURATE FOR QT<sub>c</sub> EVALUATION OF HOSPITALIZED PATIENTS WITH SUSPECTED OF SARS-CoV-2 INFECTION (COVID-19)

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## Abstract

**INTRODUCTION:** The COVID-19 infection, along with various drugs administered for its treatment may prolong ventricular repolarization and QT interval, increasing the risk of potentially fatal arrhythmias. Electrocardiogram (ECG) tracing with conventional devices increases health worker exposure to COVID-19. **METHODS:** In sequential tests, corrected QT interval (QT<sub>c</sub>) of electrocardiographic tracing obtained with AliveCor® single-lead (DI) Kardia Mobile (KM) was compared to QT<sub>c</sub> obtained with a 12-lead ECG. Authors evaluated numeric precision (proportion of measurements with a difference <10 msec), and consistency between the two devices in determining QT<sub>c</sub> prolongation (QT<sub>c</sub> [?] $\geq$ 470 ms in male, or [?] $\geq$ 480 ms in female), with kappa statistics. **RESULTS:** Records of 128 hospitalized patients with a suspected or confirmed COVID-19 diagnosis in the Hospital Universitario San Ignacio, Bogotá D.C. (Colombia) were included. The QT<sub>c</sub> interval measured with KM was similar to the interval measured with conventional ECG (442.5  $\pm$  40.5 vs. 442.4  $\pm$  40.2 ms, p: 0.986). Numeric precision was 93%. Concordance between the two devices for determining QT<sub>c</sub> prolongation was excellent, both in females (kappa: 0.901) and males (kappa: 0.896). **CONCLUSION:** Single-lead electrocardiographic tracing obtained with the AliveCor(r) Kardia Mobile allows accurate QT<sub>c</sub> interval assessment. Since KM use is fast and practical, it is ideal for reducing the exposure time of healthcare workers in the COVID-19 pandemic. The KM is capable of detecting prolonged QT<sub>c</sub> during treatment in COVID-19 patients. **KEY WORDS:** Kardia Mobile; AliveCor; corrected QT; QT interval; smart phone, ventricular arrhythmias, COVID-19.

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