

## Letter to Editor

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Dear Editor,

Application of smartphone electrocardiogram (ECG) is gaining momentum worldwide. Its utility in a clinical setting was demonstrated by Ko and colleagues in their article published in the Medical Journal of Malaysia recently.<sup>1</sup> Monitoring patients at risk of prolonged QTc interval, which could increase risk of sudden cardiac death from malignant arrhythmias, is an important and relevant measure. Patients may be able to perform self-acquisition of a single-lead ECG using an easy-to-use smartphone ECG device, that is, by placing their fingers on the touchpad of the device.

The authors have justified the use of smartphone ECG for remote assessment of patients with COVID-19. I would like to add to the discussion: this approach of remote assessment of patients using smartphone ECG can be extended to monitor patients with infectious diseases other than COVID-19. In addition, the approach can be utilised by patients with non-communicable illnesses such as atrial fibrillation (AF) - an illness that affects 59.7 million people worldwide and confers a 5-fold increase in risk of stroke. Patients with AF who take antiarrhythmic medication to control their heart rhythm face the potential risk of QTc prolongation particularly during the initiation of antiarrhythmic drug therapy.<sup>2</sup> The smartphone ECG approach may be scaled up to reach larger population such as this group of patients with AF if the QTc interval could be computed by the smartphone ECG device, validated against a conventional 12-lead ECG device, and the clinicians and patients adopt the utility.

It is noteworthy that QTc interval varies with change in the body position of the user during ECG acquisition and the variation could potentially affect clinical decision and management.<sup>3</sup> The authors of the current study<sup>1</sup> reported that the attending physician and nurses were given the options to acquire ECG using a standard 12-lead ECG device or the handheld single-lead smartphone ECG device. However, the authors did not report the following information: (1) the number of ECGs acquired using each device, (2) the body position of the patients during each ECG acquisition, (3) subgroup analysis to examine variations in QTc measurements due to change in body position, and (4) which lead in the 12-lead ECG tracing was used to compute the QTc interval. The information is relevant and important. This study<sup>1</sup> involved 30 patients and it can contribute to larger case series analysis and systematic review in the future, which can inform relevant authorities in establishing or revising guidelines on QTc monitoring.

Thank you.

### REFERENCES

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