Rational rhythms: benefits of the Cabrera ECG format

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According to the World Heart Report 2023, cardiovascular diseases (CVDs) have been the leading global cause of death for decades. Despite recent progress, health inequality is rife with low- and middle-income countries increasingly bearing their burden. Investigating electrical activity within the heart remains the foundation for diagnosing CVDs with the standard 12-lead display a mainstay in clinical practice. However, there is a growing body of evidence that suggests an alternative format could further enhance it. The Cabrera format, named after doctor and scientist Enrique Cabrera, is an anatomically rationalised order of the Einthoven and Goldberger leads paired with a reversed polarity in lead aVR. The format was first developed during the 1940s and can be used to contextualise the 6-lead ECG into a cycle revolving around the heart in the frontal plane in an analogous way to the pre-cordial leads. Despite recommendations from several authors and inclusion in the standardisation guidelines of international bodies, this format has only been routinely adopted by Sweden in 1979. The Cabrera format has been shown to be easier to learn and use and also provide a clinical advantage to diagnosing acute coronary syndrome and its differential diagnoses. Furthermore, its reversal of lead aVR is proposed to combat the historic neglect of this lead in ECG interpretation. Tradition and technical difficulties have been attributed to the Cabrera format's lack of use, but the latter can be easily overcome with modern technology. This article presents the existing evidence supporting the adoption of this format.

DOI: 10.21467/abstracts.8.3 ISBN: 978-81-989164-4-0 (eBook)