Is there an "Adequate" Heart Rate Correction for QT?

Sven Mensing

It is well known that the QT interval measurement is affected by heart rate. Such a dependency makes reliable statistical analysis complicated if not impossible. In order to compare QT over a broad range of heart rates, it is important to eliminate the dependency of QT on RR using mathematical models. The corrections are considered to derive QT values ($QT_C$) that are normalized to a heart rate of 60 bmp (RR=1000 msec).

This presentation introduces the topic and discusses important correction models, known problems, differences in handling of resting ECGs and Holter recordings with respect to QT correction, and regulatory demands (ICH-E14) regarding QT and $QT_C$.

Since there is no uniform best QT correction available today, the possibilities of statistical modeling of QT and RR will be illustrated.