Abstract Information

Presentation Preference: SNRS Student Poster Presentation

Abstract Categories: Interest Group: Biobehavioral
Thematic Areas: Child & Adolescent Health

Introduction:
The QT interval represents ventricular depolarization and repolarization and is the measurement from the onset of the QRS complex to the end deflection of the T wave. Normally ranging from 0.2-0.4 sec it is often corrected (QTc) to be independent of heart rate and prolongation is strongly related to sudden cardiac death. Diurnal variations resulting from influences of the autonomic nervous system may affect computerized 24-hour Holter QT measurements and therefore manual 12-lead electrocardiogram measurements are often used. The purpose of this study is to examine the reliability and validity of computerized 24-hour Holter QT analysis vs. standard manual 12-lead electrocardiogram in overweight-obese youth. Hypothesizing there is no difference between QT and QTc duration in overweight-obese youth using manual 12-lead electrocardiogram and 24-hour Holter computerized analysis.

Method(s):
Overweight-obese youth (n=25) aged 11-18 years underwent a physical exam with measurement of height, weight, and calculation of body mass index. Overweight and obese was defined as BMI>85th and >95th percentile respectively on age-gender specific growth charts. 12-lead electrocardiograms were obtained at standard...
paper speed of 25mm/sec at rest and manual measurement of 3 consecutive QT intervals in lead II correcting for heart rate using Bazett's formula (QTc= QT/RR) was obtained. 24-hour Holter monitors were then applied and recorded data was scanned into the Mars PC Workstation version 5.8 and digitally processed with manual template verification obtaining QT and QTc measures.

Results:
Using SPSS version 15.0 descriptive statistics will be obtained and paired t-tests will be used to compare QT and QTc measurements obtained in 25 overweight-obese youth using 12-lead electrocardiogram and 24-hour computerized Holter readings.

Discussion:
Upon completion of this pilot study the preliminary results will provide baseline reliability and validity data comparing the 24-hour computerized Holter and manual 12-lead electrocardiogram measurements to support or negate computerized analysis within a larger study.

Research Completed: Yes
Abstract History: NA
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Yes
Grants/Research Support: Y
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