P-85

Usability of QTc Dispersion for the Prediction of Orthostatic Intolerance Syndromes

Karatas Z., Alp H., Sap F., Altın H., Baysal T., Karaaslan S.
Konya University, Meram Medical Faculty, Department of Pediatric Cardiology, Konya, Turkey

Introductions Syncope is defined as transient loss of consciousness and muscle tone, usually of short duration. Noncardiac causes of syncope are classified as orthostatic intolerance syndromes (OIS). QT and QTc (corrected QT) dispersions are the measurements of myocardial instability and show predisposition to arrhythmias. In this study; clinical findings, QT and QTc dispersions of the patients who were diagnosed as OIS were evaluated retrospectively. Also, the aim of the study is to clarify the association of clinical characteristics of unexplained syncope with the outcome of the QT and QTc dispersions in children.
Methods We designed a retrospective study including 152 children and adolescents who had repeated unexplained syncope or presyncope between June 2002-August 2010. Head-up Tilt table test (HUTT) were performed for all patients. Control group consisted of 67 healthy children. The QT and QTc dispersions were measured from the 12 ECG leads.
Results 84 (55.2%) patients had positive and 68 (44.8%) had negative response to HUTT. QT and QTc dispersions were significantly higher in HUTT positive patients than in negative ($p<0.01$, $p<0.001$ respectively). Also, QTc dispersion was significantly higher in both vasovagal syncope and postural orthostatic tachycardia syndrome groups than in HUTT negative group ($p<0.001$, $p<0.05$ respectively). Specifity and sensitivity of QTc dispersion longer than 50 ms for predicting positive HUTT are 76.5% and 59.5% respectively. The positive predictive value of the test calculated as 75.8%.
Conclusions These results revealed that we can use QTc dispersion measurement as a noninvasive electrocardiographic test to evaluate OIS for predicting positive result before performing HUTT.

Keywords: Syncope; ortostatic intolerance syndrome; QTc dispersion; head-up tilt table test; children