

P-122

The Evaluation of P Wave Dispersion, QT Dispersion, QTc and QTc Dispersion On Early Diagnosis Of Autonomic Dysfunction in Children and Adolescents with Type-1 Diabetes Mellitus

*Bostan OM, Ozboyaci E, Semizel E, Uysal F, Cil E
Uludag Uni. Medical Faculty, Department of pediatric cardiology, Bursa, Türkiye*

In this study, it was aimed to determine the sensitivity of p wave dispersion (Pd), QT interval, QT dispersion (QTd), QTc and QTc dispersion (QTcd) in early diagnosis of cardiac autonomic function disorder (CAFD) that was caused by diabetes in children and adolescents with type-1 Diabetes Mellitus (Type 1 DM) and to evaluate the association between these measures and other markers such as duration of diabetes.

A total of 150 children and adolescents admitted to Pediatric Endocrinology Department between June 2009 and June 2010 with Type 1 DM diagnosis and a control group consisting of 100 healthy children and adolescents with silent murmur admitted to Pediatric Cardiology Department were enrolled to this study. Electrocardiography (ECG) was performed in all cases and heart rate, Pd, QT, QTd, QTc and QTcd were calculated. The clinical and demographic features such as age, gender, age at admission, HbA1c levels of the patients were examined and the effects of these measures on Pd, QT, QTd, QTc, and QTcd were investigated.

There were no differences between the patient and control groups in terms of age and gender.

According to the duration of follow-up, QTd and QTcd in groups 1, 2 and 3, according to HbA1c levels during follow-up QTd and QTcd in groups 2 and 3, according to blood glucose levels Qtd and QTcd in groups 2 and 3 were found to be significantly higher than the control group. In agreement with the literature, Pd was found to be significantly higher in children with Type-1 DM in our study.

Conclusion CAFD may develop in the course of Type-1 DM and may cause to significant morbidity and mortality. CAFD can be diagnosed with ECG in these cases before the development of symptoms. In our patients, in agreement with the literature, Pd, QT, QTd, QTc and QTcd were found to be significantly higher in patients without CAFD symptoms compared with the controls.