

Original Paper

Prognostic value of QT interval prolongation in patients with acute ischemic stroke

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Abstract

Background and Objective: Several studies have shown that during stroke changes occur in some paraclinic parameters which may have either prognostic or diagnostic value, including electrocardiographic changes. This study was done to evaluate the prognostic value of prolonged QT segment in patients with ischemic stroke.

Materials and Methods: This descriptive study with an easy convenient sampling was carried out on 175 patients (73 male and 102 female) with acute ischemic stroke whom have been diagnosed by brain imaging (computed tomography scan and magnetic resonance imaging). All patients were suffering from stroke for the first time and if they use any drug or have underlying disease except diabetes mellitus-hypertension- heart disease and hyperlipidemia were excluded. In the first 24 hours of admission, an electrocardiogram (ECG) were taken for measurement of QT segment and according to death or discharge, patients were divided into two groups, and the mean of QT segment (corrected QT) subsequently were assessed. Data were analyzed using SPSS-15, Chi-Square and independent t-tests.

Results: Twenty patients died in the course of admission. The mean of QT segment (corrected QT) in dead patients was 471.15 ± 61.70 and in discharged patients was 421.52 ± 62.96 ($P < 0.05$). The abundance of prolonged QT segment accompanied with death was more frequent. Hypertension, diabetes mellitus, hyperlipidemia and heart disease were significantly correlated with morbidity and mortality ($P < 0.05$). There is no relation between mortality with age and sex.

Conclusion: This study showed that mean of QT segment (corrected) and also cases of prolonged QT segment were abundant among dead patients, therefore prolongation of QT segment has prognostic value in patients with ischemic stroke.

Keywords: Stroke, Prolonged QT segment, Prognosis

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