

Cardio Autonomic Response during Mental Stress in the Wards of Normal and Hypertensive Parents

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Abstract : Objective: To assess and compare the cardiac autonomic activity after mental stress among the wards of normal and hypertensive parents. Methods: The study included 67 subjects, 30 of them had a parental history of hypertension and rest 37 had normotensive parents. Subjects were divided into control group (wards of normotensive parents) and Study group (wards of hypertensive parents). The height, weight were noted, and Body Mass Index (BMI) was also calculated. The mental stress test was carried out. Blood pressure (BP) and electro cardiogram (ECG) was recorded during normal breathing and after mental stress test. Heart rate variability (HRV) analysis was done by time domain method HRV was recorded and analyzed by the time-domain method. Analysis of HRV in the time-domain was done using the software version 1.1 AIIMS, New Delhi. The data obtained was analyzed using student's t-test followed by Mann-Whitney U-test and $P < 0.05$ was considered significant. Results: There was no significant difference in systolic blood pressure and diastolic blood pressure (DBP) between study group and control group following mental stress. In the time domain analysis, the mean value of pNN50 and RMSSD of the study group was not significantly different from the control group after the mental stress test. Conclusion: The study thus concluded that there was no significant difference in HRV between study group and control group following mental stress.

Keywords : heart rate variability, time domain analysis, mental stress, hypertensive

Conference Title : ICIMHS 2017 : International Conference on Internal Medicine and Health Sciences

Conference Location : London, United Kingdom

Conference Dates : March 14-15, 2017