

Original Article

Cardiac Autonomic Neuropathy in Type II Diabetes Mellitus Patients and its Association with the Age of the Patient, Duration of Disease and Glycemic Control

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Abstract

Objectives: Evaluation of association between age, duration of disease and glycemic control in type II diabetics with the incidence of cardiac autonomic neuropathy (CAN).

Methods: Study includes 50 Type II diabetic patients of 40-60 years age of both the genders with different duration of disease. CAN was evaluated in terms of presence of resting tachycardia, loss of sinus arrhythmia and heart rate response to Valsalva maneuver by electrocardiogram (ECG). An R-R variation with respiration of >15 beats per minute was taken normal, while 10-15 beats and <10 beats per minute were taken as borderline and definitive CAN respectively. Valsalva ratio is 1.2 or more taken as normal; Values of 1 to 1.2 & values less or equal to 1 were taken as borderline and definitive CAN respectively. If any two of them found positive, then presence of CAN was confirmed. Correlation between age, duration of disease and glycemic control with incidence of CAN was assessed.

Results: The incidence of CAN in diabetics based on above tests is 16%. There is a significant negative correlation between duration of disease and Glycated hemoglobin with deep breathing difference. ($r = -0.423^{**}$, $p=0.002$) ($r = -0.207^*$, $p = 0.04$).

Conclusion: Poorer the glycemic control and longer the duration of the disease higher the incidence of CAN in type II diabetics.

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