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ANALYSIS OF THE HEART RATE VARIABILITY IN ELDERLY PATIENTS WITH HYPERTENSION AND TYPE 2 DIABETES MELLITUS

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Objectives To discuss the significance of HRV in hypertension and type 2 diabetes.

Methods In 45 elderly hypertension patients (A group) and 32 elderly patients with hypertension and type 2 diabetes mellitus and 55 healthy elderly persons (controlled group), 24 h electrocardiogram were recorded and analysed.

Results In the elderly patients (A group), the SDNN, SDANN, SDNN-index, rMSSD, PNN50 were 122.07 ± 20.01 ms, 105.49 ± 18.63 ms, 44.52 ± 13.76 ms, 23.97 ± 6.38 ms, $6.71 \pm 3.67\%$ retrospectively. In the B group, the SDNN, SDANN, SDNN-index, rMSSD, PNN50 were 93.35 ± 21.01 ms, 81.72 ± 17.89 ms, 33.91 ± 10.98 ms, 19.04 ± 8.01 ms, $3.15 \pm 2.21\%$ retrospectively. In controlled group, the SDNN, SDANN, SDNN-index, rMSSD, PNN50 were 132.46 ± 19.23 ms, 129.58 ± 20.03 ms, 57.51 ± 16.79 ms, 37.13 ± 13.78 ms, $13.13 \pm 11.01\%$ retrospectively. The results showed that SDNN, SDANN, SDNN index, RM SSD, PNN 50 in patients with hypertension and hypertension with type 2 diabetes mellitus were much lower than those in the normal control group, especially in the hypertension with type 2 diabetes mellitus ($p < 0.05$).

Conclusions The elderly patients with hypertension and type 2 diabetes mellitus tend to have more ventricular arrhythmias, ischaemic ST segment depression and less HRV.