

THE ANALYSIS OF SUDOMOTOR SKIN RESPONSES AND RR INTERVAL IN PATIENTS WITH DIFFERENT DEGREES OF GLUCOSE TOLERANCE

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Introduction: Subclinical autonomic dysfunction is a very common finding in patients with diabetes. However, few studies have assessed autonomic function in patients with prediabetes (impaired fasting glucose and/or impaired glucose tolerance). The aim of our study was to examine the prevalence of autonomic alterations in patients with prediabetes using sympathetic skin responses (SSR) and RR interval analysis. **Methods:** We selected 15 controls, 18 patients with prediabetes and 16 patients with diabetes according to universally accepted criteria. We excluded patients with clinical symptoms of neuropathy, including autonomic complaints. We recorded the SSR from palms (p-SSR) and soles (s-SSR) induced by electrical stimuli and RR intervals through electrodes in the chest during rest, deep breathing and orthostasis maneuvers. **Results:** Both p-SSRs and s-SSRs were similar between groups. However, although within normal range, the variation of RR interval in response to different maneuvers were significantly lower in patients with prediabetes and diabetes when compared to controls (ANOVA; $p=0.01$). **Conclusions:** Patients with diabetes and prediabetes without signs and symptoms of neuropathy have different cardiac autonomic responses in comparison with controls. This could bring new information on the pathophysiology, diagnosis and prognosis of neuropathy associated with impaired glucose tolerance.