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Does glycemic control have indeed an impact on the advancement of diabetic neuropathy in patients with long term established diabetes?

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Sensorial neuropathy is one of the most common complications of diabetes. It is the cause of 70% of foot ulcers associated with diabetes. The recommendations put a large emphasis on glycemic control as a main element of diabetic neuropathy treatment. The aim of this study was to assess the association between glycemic control understanding as a glycosylated hemoglobin level and indices of diabetic neuropathy severity. **Materials and methods:** We evaluated 204 patients with diabetes (type 1 - 29; type 2 - 175 persons) hospitalized in the Department of Diabetes. Evaluation of complaints from the lower limbs was based on a questionnaire NTSS. We used a monofilament (Semes-Weinstein 5.07 – 10 g), a 128 Hz calibrated tune-fork for the vibration perception test, Tip-Therm to assess temperature sensation. Statistical analysis was performed using STATISTICA 8.1 Stat-Soft package. Descriptives statistics of analysed continous variables includes: average, median, standard deviation and range (maximum and minimum). Variables distribution was tested by normality Lillefors statistics. Non parametric Mann-Whitney statistics was used to test the difference of continous variable value between discrete variable categories; chi-square exact test was used to analyze distribution difference in two-way tables for two discrete variables comparison. Respectively parametric Pearson correlation and non-parametric Spearman correlation were used to test two continous variables coincidence, and with variable value prediction in linear regression model. **Results:** Mean HbA1c level was assessed at 8,52±1,86%. Mean NTSS result was assessed at 11,45±6,4 points. There was no correlation found between intensity of ailments from lower limbs assessed according to NTSS questionnaire and HbA1c level. Decreased sensation of touch on both sides was determined in 30% of cases, decreased sensation of temperature in 59% and decreased sensation of vibration in 35%. There were any correlations between prevalence of sensation disturbances on feet and HbA1c level.**Conclusions:** We did not find significant correlation between the intensity of neuropathic pain and prevalence of sensory disturbances in lower limbs and the current degree of glycemic control.