

476. Relationship between autonomic and somatosensory neuropathy in Type 1 (insulin-dependent) diabetic patients

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The relations between somatosensory and autonomic small fibre neuropathy (NP) have not yet been studied in detail. Thus this problem was addressed in 24 Type 1 (insulin-dependent) diabetic patients. The study included standard neurological tests, measurements of motor and sensory nerve conduction velocity, beat to beat heart rate variation (RSA), measures of temperature discrimination and pain thresholds. Patients were divided into two subgroups: A ($n=6$, patients with no neurological dysfunction) and B ($n=8$, patients with abnormal neurological and electrophysiological findings). We found a significant impairment of cold perception of the feet ($p < 0.03$) and of the RSA ($p < 0.007$) in Group B. There was a considerable but not significant difference in the duration of diabetes. There were no differences in cold thresholds of the hand, warm thresholds and pain thresholds. These results indicate a close correlation between small fibre NP in somatosensory and autonomic nervous system. In addition long fibres appear to be affected first. Vice-versa, a small fibre NP is not necessarily correlated to a clinically apparent NP. In conclusion, impairment of thermal discrimination is often found in advance of clinically significant symptoms such as dysaesthesias or pain.