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Titel des Beitrags:
Levels of three distinct p75 neurotrophin receptor forms found in human plasma are altered in type 2 diabetic patients.

Abstract:
AIMS/HYPOTHESIS: The p75 neurotrophin receptor (p75NTR) has been shown to appear in the plasma of diabetic rats, possibly indicating diabetic neuropathy. The aim of this study was to use a semi-quantitative assay for human plasma p75NTR to investigate whether this receptor is a marker of peripheral diabetic neuropathy (DPN) and autonomic cardiovascular neuropathy (CAN) in type 2 diabetic patients. SUBJECTS AND METHODS: Eighty type 2 diabetic patients and 25 controls without diabetes were analysed for p75NTR immunoreactivity by western blot analysis. DPN was assessed using the Neuropathy Disability Score (NDS). Cardiovascular autonomic function was detected using a standardised analysis of heart rate variability. RESULTS: Three distinct p75NTR signals were detectable in human plasma at approximately 75, approximately 51 and approximately 24 kDa, representing the full length receptor (FL) and its intracellular domain (ICD) and extracellular domain (ECD), respectively. Levels of total plasma p75NTR immunoreactivity in patients with type 2 diabetes were similar to those in controls. Type 2 diabetic patients had significantly higher plasma levels of ICD and lower levels of ECD. However, there were no correlations of total p75NTR immunoreactivity or ECD or ICD immunoreactivity with NDS or aspects...
of CAN. CONCLUSIONS/INTERPRETATION: Levels of the ECD of p75NTR are reduced and levels of the ICD are increased in the plasma of type 2 diabetic patients. None of the p75NTR subunits identified in human plasma seem to be a marker of peripheral or autonomic neuronal function in patients with type 2 diabetes.