

DEBATE: DO VASCULAR FACTORS INFLUENCE THE COURSE OF PD? - YES

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To study the impact of brain vessel pathology on the clinical status of Parkinson's disease (PD), in 57 consecutive patients the clinical and neuropsychological data were compared with clinical an MRI signs of vascular impairment and with the ultrasound brain vessel investigations. There was a significant correlation between clinical and cognitive status and intimomedial thickness, which is an indicator of large vessel impairment. Cognitive status was significantly related to the pulsatility index (an indicator of small vessel impairment). This study provides evidence that subclinical vascular pathology could influence the clinical status by contributing to motor and cognitive dysfunction in PD.

:In the second part, the baseline clinical, neuropsychological, ultrasonographic and magnetic resonance data obtained from patients who died (n=18) during a four-year follow-up period were compared with the data of patients who survived.

The ultrasound/ MRI data displayed a more severe vascular impairment in the deceased patients. Differences were significant between both groups with respect to age; clinical and cognitive status; intima-media thickness; and the resistance index (indicators of large and small vessel impairment). The sum score of white matter hyperintensities was significantly higher among decedents. A cluster analysis displayed two clusters that differed in the two parameters, i.e. in the age and in the sum score.

Conclusions: This study provides evidence that co-morbid atherosclerosis and otherwise subclinical impairment of brain vessels may contribute to motor and cognitive dysfunction and mortality in Parkinson's disease. The vascular pathology may act in association with other co-morbidities on the terrain of the progressive neurodegenerative pathology. This is a reason to be more attentive to the therapy of vascular pathology in PD patients.