

Cerebrocerebellar relationships in normal subjects and patients with dementia of the Alzheimer type: a SPECT study

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The relationships between blood flow in the cerebrum and the cerebellum was investigated in 21 normal subjects and 21 patients with dementia of the Alzheimer type (DAT). In normal subjects, only asymmetry in the frontal cortical blood flow was significantly correlated with asymmetry in the contralateral cerebellar blood flow. However, a significant correlation between asymmetry in the cerebral cortical blood flow in many areas and the blood flow in the contralateral cerebellum in DAT patients was observed. These results suggest the existence of a functional relationship between the cerebrum and the cerebellum in both normal and DAT groups, mediated by neuronal mechanisms through crossed fiber pathways. However, there are regional differences in the cerebrocerebellar relationship in normal resting and pathological states.

Key words: cerebrum, cerebellum, normal subjects, dementia of the Alzheimer type, SPECT