

Olfactory deficits and cognitive dysfunction in Parkinson's disease

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Background: Olfactory deficits and executive dysfunction have been reported in Parkinson's disease (PD). However, the association between these deficits has not been thoroughly examined. **Methods:** We studied 44 PD subjects and 17 age-matched controls. In PD subjects, symptoms were assessed with the Unified Parkinson's Disease Rating Scale and the Hoehn and Yahr scale. Cognition in both groups was assessed by a neuropsychological battery. Olfactory identification and sensitivity was evaluated with the Sniffin' Sticks® test and olfactory detection threshold, respectively. **Results:** PD subjects showed significant deficits in olfactory function and working memory, executive function, speed of information processing, visuospatial skills and phonological verbal fluency tests when compared with the control group. Moreover, there was a significant correlation between olfactory sensory deficits and executive dysfunction. In PD patients with up to 12 months of motor symptoms, results were equivalent.