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Olfactory hallucinations in Parkinson's disease patients

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Introduction: Olfactory dysfunctions and hallucinations are considered common nonmotor symptoms in Parkinson's disease (PD). Visual and auditory hallucinations are well-known; however, olfactory hallucinations (OHs) are not fully investigated [1].

Objective: To evaluate OHs in PD patients, and their correlation to motor impairment, cognitive abilities, visual and auditory hallucinations, and olfactory and gustatory function.

Methods: A sample of 273 subjects was enrolled: 141 PD patients (mean age ± SD: 70.1 ± 9.5 years) and 132 healthy controls (mean age ± SD: 69.4 ± 9.6 years). In all patients, the following parameters were evaluated: motor symptoms (UPDRS-III), olfactory function, cognitive abilities, and occurrence of OH, gustatory hallucinations (GHs), and visual/auditory hallucinations.

Results: OHs were found only in PD patients with a percentage of 11.3%. Among PD patients with OHs, 2.8% also presented GHs. High significant frequencies of females, the presence of visual/auditory hallucinations, and a high mean UPDRS-III score were found in patients with OHs related to patients without them. Binary logistic regression evidenced the presence of visual/auditory hallucinations and sex as main variables predicting the presence of OHs.

Conclusions: Our data indicated that OHs occur frequently in PD patients, especially in women, and often concomitant with visual and auditory hallucinations, without any association with olfactory impairment.

References

[1] CV Kulick; KM Montgomery; MJ Nirenberg. Comprehensive identification of delusions and olfactory, tactile, gustatory, and minor hallucinations in Parkinson's disease psychosis. Park. Relat. Disord. 2018, 54, 40–45.