Non-motor correlates of smoking habits in de novo Parkinson's disease

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Background.

Parkinson's disease (PD) subjects are less likely to ever smoke and are more prone to quit smoking, as compared to controls. Therefore, smoking habits can be considered part of the non-motor phenotype, preceding the onset of motor PD by several years. With this paper we want to explore non-motor symptom (NMS) correlates of smoking habits in de novo PD

Methods.

This cross-sectional study included 281 newly diagnosed, drug-naïve PD subjects, recruited in Naples (Italy) and in Kassel (Germany). All subjects completed the NMS Questionnaire (NMSQ), and were investigated for smoking status (never, current and former smokers) and intensity (pack-years).

Results.

140 PD subjects never smoked, 20 currently smoked, and 121 had quit smoking before PD diagnosis. NMSQ total score did not associate with smoking status, but with smoking intensity (p=0.028; coefficient=0.088). A multinomial logistic regression stepwise model presenting never smoking as reference, selected as NMSQ correlates of current smoking: sex difficulties (p=0.002; OR=5.254), daytime sleepiness (p=0.046; OR=0.085), insomnia (p=0.025; OR=0.135), and vivid dreams (p=0.040; OR=3.110); and of former smoking: swallowing (p=0.013; OR=0.311), nausea (p=0.027; OR=7.157), unexplained pains (p=0.002; OR=3.409), forgetfulness (p=0.005; OR=2.592), sex interest (p=0.007; OR=0.221), sex difficulties (p=0.038; OR=4.215), and daytime sleepiness (p=0.05; OR=0.372). An ordinal logistic regression stepwise model selected as NMSQ correlates of smoking intensity: nocturnal restlessness (p=0.027; coefficient=0.974), and leg swelling (p=0.004; coefficient=1.305).

Discussion.

Certain NMSs are associated with different smoking status and intensity, suggesting a variety of adaptive mechanisms to cigarette smoking.