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DOES NICOTINE HAVE A PRO-COGNITIVE EFFECT IN OBSESSIVE-COMPULSIVE DISORDER?

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Introduction: Previous studies suggested that cognitive enhancement associated with nicotine may be a form of "self-medication" explaining high rates of smokers among patients with Schizophrenia or Mood Disorders. On the contrary, patients with Obsessive-Compulsive Disorder (OCD), though are characterized by cognitive impairment, do not show a higher tendency to smoking than general population and show a lower tendency to smoking than other psychiatric patients.
Objectives: Our pilot study aims to investigate the effect of cigarette smoking on cognitive performance in patients with OCD. No published studies investigated this issue.
Methods: Fifty-nine inpatients suffering from OCD (22 smokers and 37 non-smokers) were recruited. At the beginning of the hospitalization, we assessed different cognitive domains using a standard non-computerized neuropsychological battery (memory, attention and verbal fluency). In addition, 28 patients out of the 59 (12 smokers and 16 non-smokers) underwent a computerized neuropsychological evaluation specific for executive functions (CANTAB software). OCD-clinical symptoms were evaluated by Y-BOCS.
Results: Smokers and non-smokers did not differ for demographic (age, schooling) and clinical variables (Y-BOCS scores). Compared to non-smokers, smokers showed worse performances on the phonemic fluency test (non-computerized battery) and a tendency to risk higher amount of money on a decision making task (CANTAB).
Conclusions: Smoking does not seem to improve cognitive performances of patients with OCD, whereas it seems to affect impulsivity, thus worsening decision making ability and flexibility, possibly by an effect of nicotine on dopaminergic neurotransmission in orbito-frontal cortex. This may explain the low rate of smokers in patients with OCD.

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