

this study. Structured Clinical Interview for DSM-5 Disorders, a Structured sociodemographic and clinical form, The Unified Parkinson's Disease Rating Scale, Frontal Assessment Battery (FAB), Parkinson's Disease Questionnaire-39 (PDQ-39) and Yale-Brown Obsessive-Compulsive Scale were applied to the participants. The relationship between PD and OCD and related disorders and obsessive-compulsive symptoms was evaluated.

**Results:** Contamination obsession was found in 21.3% of patients and 16.3% of the control group; cleaning compulsion was found in 13.8% of patients and 8.8% of the control group. Two groups were compared in terms of obsessions ( $p=0.215$ ) and compulsions ( $p=0.361$ ); no statistically significant difference was found between the groups. The presence of obsessions ( $p=0.027$ ) and compulsions ( $p=0.007$ ) in patients with a family history of Parkinson's disease was found to be significantly higher. A statistically significant correlation was found between FAB scores and PDQ-6 (cognition item) in the Parkinson's group ( $r = -0.359$ ,  $p=0.001$ ). Compared to the control group (mean 15.08; SD: 1.84), FAB scores were found to be significantly lower in the Parkinson's group (mean 13.95; SD: 2.23) ( $p=0.001$ ). The presence of any obsession ( $p=0.003$ ) or any compulsion ( $p<0.001$ ) was found to be significantly higher in patients with hoarding in the Parkinson's group. The presence of any obsession ( $p<0.001$ ) or any compulsion ( $p<0.001$ ) was found to be significantly higher in patients with Skin Picking Disorder in the Parkinson group. The scores obtained from the PDQ emotional well-being ( $p=0.027$ ) and bodily discomfort ( $p=0.001$ ) items in the Parkinson group with Skin Picking Disorder were significantly higher than the Parkinson group without Skin Picking Disorder.

**Conclusions:** PD is characterized by dysfunction in frontobasal ganglia circuits. A similar circuit is also important in OCD. Obsessions and compulsions, Hoarding Disorder, Skin Picking and Trichotillomania may accompany PD. Family history increases any obsession and compulsion in PD.

**Disclosure of Interest:** None Declared

## EPP0195

### Electroencephalographic study of the Error Related Negativity in patients suffering from treatment-resistant obsessive-compulsive disorder

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**Introduction:** The physiopathology of patients with treatment-resistant obsessive-compulsive disorder (OCD) may differ from that of treatment-responsive patients. Cognitive evoked potentials may be one of the ways to detect these differences. The error-related negativity (ERN) is an electrophysiological correlate of error detection during the execution of a motor task, which is larger in patients

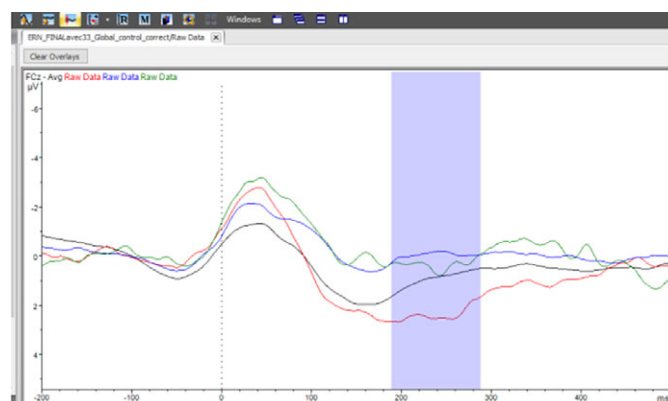
with OCD than in typical people. According to the literature, the ERN could vary according the patients' treatment-resistance.

**Objectives:** The main goal of this study was to assess whether the ERN, which begins 20 ms before the motor response and reaches its maximum 80 ms later, was different between non-resistant and highly resistant OCD patients.

**Methods:** Forty-seven OCD patients and their age- and gender-matched controls were asked to perform a flanker task while the potentials evoked by their motor responses were recorded. For each participant, the difficulty of the task was adjusted to get an error rate of about 20%. Treatment-resistance was evaluated using Pallanti and Quercioli's (Prog Neuropsychopharmacol Biol Psychiatry 2006; 30 400-412) resistance scales.

**Results:** In all participants, response errors evoked an ERN at fronto-central electrodes [Fz, FCz, red and green lines on the figure], whereas the negativity was absent or smaller for correct responses (black and blue lines on the figure, both  $ps < .01$ ). As expected, the ERN of OCD patients was consistently larger and of longer duration than that of control participants (compare the green and blue lines with the red and black ones, respectively). Interestingly, the amplitude of the potentials evoked by correct responses at central and centro-parietal electrodes on the left side of the brain [C5, C3, CP5] was significantly less negative in treatment-resistant patients (all  $ps < .05$ ). In control participants, the ERN recorded at fronto-central electrodes were followed by a positive wave which reached its maximum between 170 and 270 ms after the response, and was larger after errors than after correct response. In OCD patients in contrast, this positive wave was absent whether the response was correct or not.

**Image:**



**Conclusions:** The significant correlation observed between OCD patients' treatment resistance and the potential evoked by correct responses on the left side of the brain suggest that this potential could be used as a marker of treatment-resistance. The absence in OCD patients of the positive wave that follows the ERN in control participants suggests that OCD patients were not fully aware of whether or not their response was correct.

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