33rd European College of Neuropsychopharmacology Congress (ECNP),
12-15 September 2020
Vienna, Austria

Emotion recognition processing as a predictor of clinical response to SSRI treatment in first episode versus recurrent depression

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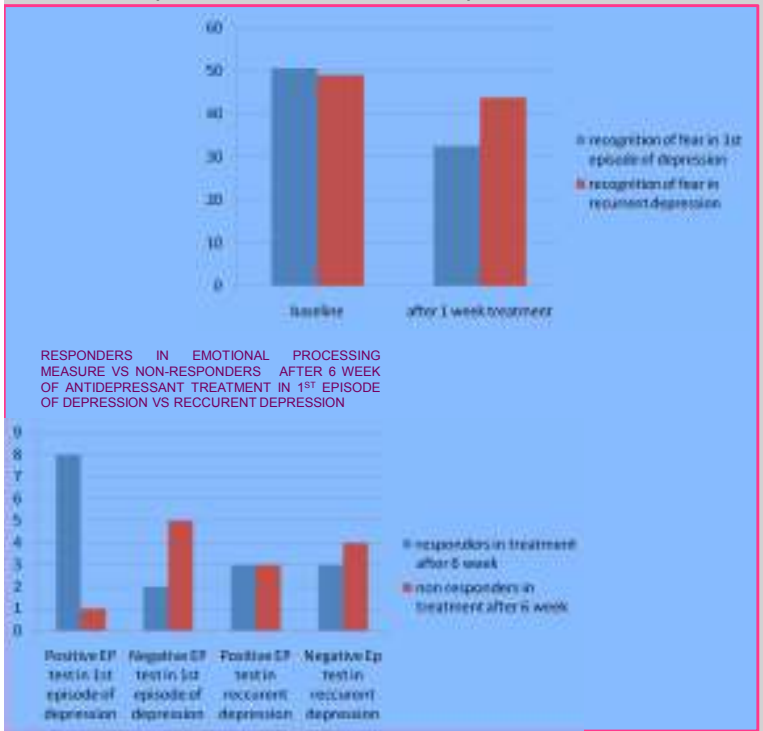
Background: One in ten people will experience depression at some time in their life. Around half of those who have an episode recover, and around 15% of those experience chronic recurrence. Antidepressants that inhibit the reuptake of serotonin (SSRI) are effective in the treatment of depression. Emotion recognition is a core feature of social interaction. Deficits in emotion recognition have been associated with depression. Depression patients, compared with healthy controls, show negative biases in the perception of emotional facial expressions by overestimating fear and underestimating happiness. Antidepressant treatment can restore the balance between negative and positive emotional processing early in treatment, indicating a role of this effect in later mood improvement. The Emotion Recognition Task (ERT) is a computer-generated paradigm for measuring the recognition of six basic facial emotional expressions: anger, disgust, fear, happiness, sadness, and surprise. During this test, video clips of increasing length are presented, starting with a neutral face that changes into a facial expression of different intensities.

Objective: In this study, we investigated the role of emotion recognition processing as a predictor of clinical response to SSRI treatment (escitalopram) in individuals with first episode versus recurrent depression.



Methods: The sample consisted of 29 women who have visited the Mental Health Center, aged 30-40 y.o., with educational level > 9 y.o.e, diagnosed with first episode mild-moderate unipolar depression versus recurrent depression (over five years with the disease, over 3 episodes of recurrence) (ICD-10 diagnosis). Participants completed the Hamilton Depression Rating Scale (HAM-D), and the Montgomery-Asberg Depression Scale (MADRS) and were divided into two groups, according to the type of the disease: 1st Group: First episode depression (16 women) and 2nd Group: Recurrent depression (13 women). ERT, HAM-D, and MADRS were administered at baseline, after one week and after 6 weeks of SSRI administration.

Results: In the first episode group, early changes, between baseline and week 1, in the function of emotional processing system were able to predict clinical response at week 6, with the majority of the participants performing an increased recall of positive (happiness) versus negative (fear) emotional material in the ERT. In particular, at baseline, participants overestimated fearful faces and recognized the facial expression of fear even at its mildest intensity. The facial expression of happiness was underestimated, mainly when the intensity of the expression was low. Following one week of therapy, participants showed an increased recognition of faces as happy. When the intensity of the facial expression of fear was low, they performed a decreased response bias towards fearful faces. On the contrary, in the second group, participants with recurrent depression did not show any change in emotional bias in the first week of SSRI treatment.

Conclusions: Our findings suggest that emotion recognition processing is an excellent predictor of clinical response to SSRI treatment in first episode depression; however it does predict clinical response in recurrent depression. These results support the hypothesis that recurrent episodes of depression may lead to impairment across a network of regions including the anterior cingulated, insula, amygdale and thalamus.