P02-08

THE INFLUENCE OF TREATMENT-RESISTANCE ON THE SEROTONIN $_{2A}$ RECEPTOR IN UNIPOLAR MELANCHOLIC DEPRESSION

C. Baeken, R. De Raedt, N. Vanderbruggen, D. Zeeuws, L. Santermans, C. Van Hove, A. Bossuyt

UZBrussel, Brussels, Belgium

Introduction: Major depression is one of the most common mental diseases, and quite a number of patients are resistant to several psychopharmacological interventions, even when applying current treatment guidelines. To date, it remains unclear as to how the serotonergic system is implicated in treatment-resistance found in melancholically depressed patients.

Objectives & aims: In this study, we examined the involvement of post-synaptic 5-HT$_{2A}$ receptors in the pathophysiology of treatment resistance in major depression with ^{123}I-5-I-R91150 SPECT, focusing on the frontal cortex and hippocampus.

Method: 15 unipolar antidepressant naïve (ADN) patients and 15 treatment-resistant depressed (TRD) patients, all of the melancholic subtype, matched for age and gender were studied. All subjects were antidepressant free when they underwent a static ^{123}I-5-I-R91150 SPECT scan.

Results: Compared to ADN patients, TRD patients displayed significantly less 5-HT$_{2A}$ receptor binding index (BI) in the dorsal regions of the prefrontal cortex and in the anterior cingulate cortex. No hippocampal 5-HT$_{2A}$ receptor BI differences were observed.

Conclusions: Our results suggest that when confronted with treatment resistance in melancholic depression the 5-HT$_{2A}$ receptors in the DPFC-ACC axis are significantly more down-regulated when compared to depressed ADN patients. This might to some extent explain the observed continued cognitive problems and might reflect the long-term serotonin depletion with reduced neurogenesis in treatment resistant patients.

https://doi.org/10.1016/S0924-9338(11)72309-4 Published online by Cambridge University Press