Predictive markers of non-response to antidepressants: Relevant biomarkers with easy access

Major depression is a heterogeneous disorder. With standard monoamine-based antidepressants only around 1/3 of depressed subjects experience remission. This leads to the conclusion that other functional systems are relevant as well. We focused on the functional role of the mineralocorticoid receptor (MR) system, which has effects on autonomous and endocrine regulation including aldosterone and cortisol signaling, the regulation of sleep and heart rate variability, and mutually interacts with salt appetite and may affect brain white matter volume. Methodologically independent markers, many of which can be collected outside specialized settings, supports the classical concept of a close relationship between autonomic and emotional plasticity. In particular high CNS, MR activation occurs in refractory patients with depression. This MR activation is reflected in high slow wave sleep, low heart rate variability, high aldosterone and low cortisol saliva concentrations, low blood pressure and peripheral electrolyte changes. In addition, specific changes in brain imaging, in particular for the white substance occurs in these subjects. These markers are easily accessible both for clinical research and clinical practice and can identify subjects, who have a low likelihood of responding to standard antidepressants.

Biography

Harald Murck did his clinical and scientific training in psychiatry at the Max-Planck-Institute of Psychiatry. He works in drug development since 2000 covering both psychiatric and neurologic indications. Currently, he works as an independent consultant. In addition, he holds an academic affiliation as Adjunct Professor of Psychiatry at the Department of Psychiatry and Psychotherapy of the Philipps University, Marburg, Germany. He published 80 peer-reviewed articles.

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