Metabolic Effects of Psychotropic Drugs
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There are no psychiatric patients, only medical patients with varying degrees of psychopathology.


Patients suffering from major psychiatric disorders have reduced life expectancy. It is now well established that the increased morbidity and mortality is often caused by cardiovascular disease, cancer, inflammatory diseases and endocrine disorders such as type 2 diabetes. Yet it is only in recent years that attempts have been made to integrate the causes of physical illness with the underlying psychopathology of the disorder. Thus, it is now recognized that dysfunctional metabolism plays a crucial role in physical ill health that is associated with chronic psychiatric disorders such as depression and schizophrenia. Whether the metabolic syndrome is primarily caused by changes resulting from life style or the pathophysiology of the patient or, alternatively, is an important contribution to the psychopathology of the psychiatric disorder is an open question. A further complication relates to the impact of the drugs on the metabolism. Nowhere is this more apparent than in the reported effects of some atypical antipsychotics and antidepressants in causing weight gain, and possibly type 2 diabetes. Yet, as is apparent from several chapters in this volume, it is uncertain whether the drugs cause the metabolic syndrome or that they exacerbate a vulnerability that exists in some major psychiatric disorders.

In this volume, the editors have brought together experts from clinical psychiatry, epidemiology, neuroimmunology, endocrinology and neuroscience to explore the different facets of the metabolic syndrome and its connection with the chronic effects of psychotropic drugs and with the psychopathology of some major psychiatric disorders.
Leonard puts forward the hypothesis that schizophrenia may be a low grade chronic inflammatory disorder by weaving together its possible viral, neurodevelopmental origins with recent evidence showing changes in various inflammatory markers such as IL-6 and TNF. Vemuri and coworkers focus on the important topic of insulin resistance and bipolar disorder with obesity, lifestyle choices and mood stabilizers playing important roles in women suffering from this mood disorder. Citrome and Vreeland discuss the topical and at times controversial issue of why obesity may develop in those mental illness and offer pertinent and practical solutions in the form of ‘small steps’ that may help the vast majority of patients to gain control over their weight and also discuss the possibility of using pharmacological and surgical interventions while Bushe focuses on the glucose abnormalities observed within chronic psychiatric disorders and the role of the illness versus antipsychotic agents. The author of this chapter poignantly observes that we still have not unraveled this complex relationship despite the explosion of information that we have witnessed over the last years. Based upon criteria set forth by the UK National Screening Committee, Holt and Peveler offer a compelling set of reasons for why type 2 diabetes and cardiovascular disease should be screened for in those with mental illness. Afzal and Thakore explore the relationship between stress, schizophrenia and the metabolic syndrome showing that a dysfunctional hypothalamic-pituitary-adrenal axis may be a common occurrence in both conditions and be partly responsible for their respective psychopathological and physical manifestations.

The chapter by Goethe and coworkers offers important metabolic insights into probably the most common psychiatric illness, namely depression. This chapter is a study which in effect details the rates of the metabolic syndrome in major depression and the various associations that may be related. In particular they find that atypical antipsychotics may not be associated with the higher than expected rates observed. Fitzgerald and Dinan then focus on how certain antipsychotics decrease dopaminergic activity leading to an increase in prolactin release which has potentially serious adverse effects ranging from lowering bone mineral density which can lead to fractures to being associated with breast and prostate cancer. Wildgust and Kohen discuss the propensity of antipsychotics to induce hyperprolactinemia which in turn can induce a lowering of bone mineral density, gynecomastia, galactorrhea and various menstrual cycle changes resulting in adverse hormonal profiles that could possibly potentiate the inherent risk that those with psychiatric illnesses have to cardiovascular disease.

This is the first monograph in a series devoted to pharmacopsychiatry. The aim of the series is to consider the inter-relationship between psychotropic drugs and the underlying psychopathology of psychiatric disorders. The current volume will consider the various aspects of the metabolic syndrome in major psychiatric disorders. Hopefully the contents of this first volume will be of interest not only to clinical psychiatrists but also to endocrinologists, immunologists, cardiologists and clinical neuroscientists.

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