Hyperprolactinemia is a Major Problem in Patients Treated with Antipsychotic Drugs

To the Editor,

We have read with great interest the article "Relationship between plasma levels of prolactin and the severity of negative symptoms in patients with schizophrenia" written by Ates et al.[1]. They aimed to investigate the relationship between prolactin levels of plasma and negative symptoms in patients with schizophrenia. They demonstrated that prolactin levels are positively correlated with the severity of negative symptoms. We would like to thank to the authors for their contribution of the present study, which is successfully designed and documented.

In Ates et al's article, the authors mentioned that gonadal steroids could play a significant role in the pathophysiology and could affect the course of schizophrenia[2]. Additionally, it is known as classically, hyperprolactinemia is associated with disturbances in the levels of key reproductive hormones[3]. For instance, Hyperprolactinemia inhibiting the effect of FSH and LH could decrease the levels of testosterone and estradiol. Although, there is a relationship between gonadal steroids and both hyperprolactinemia and schizophrenia, researchers in this study did not consider the levels of testosterone, estradiol, FSH, and LH. Hence, the results might be different if the authors had mentioned those factors in their study.

Prolactin exists in different forms in circulation as monomeric, dimeric, and polymeric. While the monomeric form, defined biologically active, constitutes the majority of total prolactin; the polymeric form defined macroprolactin and accepted biologically inactive is a complex of monomeric prolactin with IgG. Macroprolactinemia is characterized by excess of macroprolactin levels and seen 10-25% in patients with hyperprolactinaemia[4]. This condition does not require any treatment, since it is not clinically significant[3]. Another important issue in the differential diagnosis of hyperprolactinemia is to investigate the drug induced hyperprolactinemia such as metoclopramide, domperidone, and verapamil[5]. This situation is quite often seen in clinical practice. Therefore, establishing of macroprolactinemia and drugs increasing the prolactin levels is quite important to avoid the misdiagnosis and overtreatments in patients with hyperprolactinemia.

In conclusion, it is a pleasure for us to see that physicians not primarily involved in endocrinology field are also aware of hyperprolactinemia and its association with psychiatric disorders and medications. So, it would have been better if these additional crucial factors were included in the paper.

Keywords: *hyperprolactinemia, antipsychotic, endocrinology*

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Faces and Shadows: Cabergoline-Induced Acute Psychosis in a Woman with no Previous Psychiatric History

To the Editor,

Cabergoline is a potent dopamine receptor agonist on D2 receptor and primarily used for the treatment of disorders with hyperprolactinemia, as a result of idiopathic effect or prolactinoma. Antipsychotic drugs may also lead to hyperprolactinemia due to their D2 dopamine receptor binding characteristics. Psychiatric side effects including somnolence, depression, anorexia, anxiety, and pathological gambling have been reported for the patients treated by cabergoline[1]. However, psychosis is uncommonly encountered as a result of cabergoline use. It has been only reported for the patients suffering undiagnosed depression and schizophrenia[2,3]. This report describes a case of cabergoline-induced transient psychosis in a woman with no previous psychiatric disorder history.

A 24-year-old married woman with a known case of idiopathic hyperprolactinemia (70 ng/ml) on cabergoline therapy for 3 weeks (0.5 mg twice weekly), consulted her family doctor with complaints of headache, photophobia, and uncontrollable anger attacks. The magnetic resonance imaging (MRI) of the brain, taken 3 weeks ago, was unremarkable. General physical and neurological examination findings were found to be normal. Besides that, results of thyroid function tests and other routine laboratory tests were also found to be normal except for the increased erythrocyte sedimentation rate. Despite the fact that she had been referred to an outpatient clinic for further investigation, she did not accept psychiatric referral. Five days after the initial admission, the patient again consulted her doctor with complaints of psychotic symptoms including delusions and visual hallucinations. She reported that she had seen similar faces at different places temporarily, and occasionally shadows behind her, as if she was being watched. Her husband reported that he had once found the patient sitting up with blank stares, and she could not remember what had happened. The patient rejected the physician's suggestion of a psychiatric referral, whereupon her doctor got in contact with a pharmacologist for drug information and its possible adverse effects. Since the complaints began soon after the initiation of drug therapy, a provisional diagnosis of drug-induced psychosis was established, and cabergoline was discontinued. After the first week of cabergoline discontinuation, her psychotic symptoms dramatically improved, and she reported no psychiatric complaints. The patient was then followed-up over 6 months. During this period of time, she did not show any psychotic symptoms and need any psychiatric treatment. Ten months after cabergoline discontinuation, the patient's prolactin level was 70 ng/ml, and she was diagnosed as having euthyroid Hashimoto's thyroiditis.

Based on the current literature, this is the first case of cabergoline-induced acute psychosis in a patient with no previous psychiatric history. The case reports do not allow to reach any strong conclusions. However, this report may come in useful to increase the awareness of substance/medication-induced psychotic disorder psychosis and the possible adverse effects of cabergoline.

Keywords: *cabergoline, acute psychosis, adverse effect*

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