

Sertraline Induced Galactorrhea

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ABSTRACT

There is limited literature reporting galactorrhea with antidepressants, including selective serotonin reuptake inhibitors. In this case report, a patient with adjustment disorder who developed galactorrhea with sertraline was presented.

Keywords: Galactorrhea, sertraline, selective serotonin reuptake inhibitors

INTRODUCTION

Hyperprolactinemia may be observed secondary to various medical conditions. In psychiatry, it is an adverse effect that can be experienced during the use of some psychotropic drugs, particularly antipsychotics (1).

There are no controlled trials on antidepressant induced hyperprolactinemia; however, there are some case reports in the literature. In these case reports, particularly hyperprolactinemia induced by paroxetine and escitalopram has been presented (2,3). In the literature, there are three case reports about galactorrhea associated with the use of sertraline. Bronzo and Stahl, in a case with major depressive disorder, have reported galactorrhea after a 5-week treatment using sertraline 100 mg/day. In this case, 3 weeks after the discontinuation of sertraline, galactorrhea vanished (4). Lesedi reported sertraline induced galactorrhea in a 40-year-old female with a diagnosis of major depressive disorder (5). In another case by Nebhinani, galactorrhea evolved on the 16th day of sertraline treatment in a patient with dysthymic disorder (6).

Hyperprolactinemia associated with the use of selective serotonin reuptake inhibitors (SSRI) is explained by the direct stimulation of postsynaptic serotonergic receptors in the hypothalamus and the serotonergic inhibition of dopamine, which is a prolactin inhibiting factor (4). Galactorrhea without an increase in prolactin may be caused by the indirect inhibition of tuberoinfundibular dopaminergic neurons (7). SSRIs were found about eight times more risky than other antidepressants for the induction of lactation (8). It has been reported that hyperprolactinemia causes sexual dysfunction, decrease in bone density, infertility, depression, and anxiety (9). These negative results require rigorous questioning of galactorrhea and amenorrhea in patients using antipsychotics and antidepressants.

In this article, we present the case of a patient diagnosed with adjustment disorder (with mixed anxiety–depressive mood) and galactorrhea on the 13rd day of sertraline treatment and will discuss the effects of sertraline on dopaminergic system.

CASE

A 34-year-old, married female admitted for psychiatric examination with complaints of distress, crying, and anhedonia ongoing for 6 weeks. The patient's complaints started after a relationship crisis. On her mental state examination, her behavior and mood were anxious and depressive. Her thought process consisted of problems with her husband. There was no perception and memory impairment. Her intelligence seemed to be clinically normal; furthermore, she developed insights. Her appetite and libido decreased; however, she had no sleep disorder. Neither she nor her family has a history of psychiatric diseases. She does not smoke and use any psychoactive substance. Alcohol use is at the level of social drinking. Biochemistry, complete blood count, thyroid function tests, and vitamin B12 and folic acid levels were normal. Cranial magnetic resonance (MR) imaging showed no pathology. Hamilton Depression Rating Scale-17 items (HDRS), Hamilton Anxiety Scale (HAS), and Beck Depression Scale (BDS) scores were 18, 12, and 24, respectively.



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The patient was diagnosed with adjustment disorder (with mixed anxiety–depressive mood). Sertraline 25 mg/day oral treatment given besides couple psychotherapy. After a week, sertraline dose was increased to 50 mg/day. On the 13rd day of treatment, she complained of “flow of milk from both breasts.” Galactorrhea was considered. Because neither obstetrics nor neurology consultation results showed hyperprolactinemia and/or adenoma in pituitary, starting a dopamine agonist agent was not considered. Sertraline treatment was discontinued, and the patient was closely monitored. A week after the discontinuation of sertraline, galactorrhea diminished, and after 16 days totally disappeared. As patient's depressive symptoms remained, fluoxetine 20 mg/day oral treatment was initiated. During the followup, two months after fluoxetine treatment, no galactorrhea was observed. There was a significant improvement in depressive symptoms and relationship issues of the patient whose psychotherapy process still continues. Her HDRS, HAS, and BDS scores were 11, 6, and 9.

DISCUSSION

Each of the antidepressants belonging to SSRI group has different neurochemical features, and differ in binding to noradrenaline, dopamine, and muscarinic receptors and carriers (10). Recent researches suggest that sertraline inhibits dopamine reuptake, whereas paroxetine reduces noradrenaline reuptake in rats (11). In a study, Kitaichi et al. (12) investigated the changes in monoamines and metabolites in different regions of the brain after antidepressant application in rats. They observed that dopamine levels in nucleus accumbens, and striatum increased after sertraline application. In rats given fluvoxamine and paroxetine, a similar dopamine increase was not observed. In another study with sertraline as well as with venlafaxine and duloxetine, a similar dopamine increase was reported in rats (13). Dopamine reuptake inhibition observed after sertraline administration in in vivo experiments seems to be parallel to the dopamine increase in nucleus accumbens and striatum of rats observed after sertraline intake. However, to date, the association between antidepressant efficacy and these pharmacological properties is not known.

Today, although serotonin and noradrenaline stand in the forefront of the biological basis of depression, recent studies make us think that dopamine plays a prominent role in the biological mechanism of depression and the efficacy of antidepressant treatments (14). Various researches suggested encouraging results of dopamine agonists bromocriptine and pergolide combined with an antidepressant in treatment resistant depression (15,16). If increased dopamine levels associated with the effects of sertraline in the mesolimbic reward system are observed, sertraline provides antidepressant efficacy superior to other SSRIs. In a meta-analysis that compared the efficacy of antidepressants, Cipriani et al. (17) reported that sertraline has higher antidepressant efficacy than other SSRIs. The reason of this superiority may be the dopaminergic effect observed in sertraline, and in our case, responsible for galactorrhea.

In conclusion, sertraline is an SSRI that has an impact on dopaminergic system. This neurochemical property may be responsible for galactorrhea

associated with sertraline, and also may provide antidepressant efficacy superior to other SSRIs.

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