

Case Report

Galactorrhea case unrelated to the hyperprolactinemia caused by paliperidone use: A case report

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Abstract. Paliperidone is an atypical antipsychotic derived from the combination of 9-hydroxy risperidone which is an active metabolite of risperidone with OROS (osmotic controlled-release oral delivery system) technology. Galactorrhea may develop as a result of hyperprolactinemia caused by paliperidone use. In our case, paliperidone was added to the treatment of a 35-year old female patient having a hypomanic episode. 2.5 months after the start of paliperidone treatment, the patient experienced galactorrhea and menstruation delays. Unexpectedly, normal hyperprolactinemia does not accompany galactorrhea and other symptoms.

Key words: Paliperidone, galactorrhea, hyperprolactinemia

1. Introduction

Paliperidone is an atypical antipsychotic derived from the combination of 9-hydroxy risperidone which is an active metabolite of risperidone with OROS (osmotic controlled-release oral delivery system) technology. In addition to being a D2 and 5HT2A receptor antagonist active through central pathway, paliperidone also has an antagonist effect on alpha1 and alpha2 adrenergic and H1 histaminergic receptors.

Though relatively more frequent with typical antipsychotics, galactorrhea is a side effect that develops in both generations.

When galactorrhea development mechanism of atypical antipsychotics is reviewed, serotonin and dopaminergic receptors as well as their effects stand out. Serotonin and dopamine have a mutual interaction in the release of prolactin from the lactotroph cells of hypophysis; while dopamine inhibits prolactin release, serotonin induces prolactin release by stimulating 5-HT2A receptors. With paliperidone, as with other atypical antipsychotics, serotonin cannot induce prolactin release anymore due to concurrent 5-HT2A blockage, which results in moderation in hyperprolactinemia (1).

There are also case reports regarding galactorrhea secondary to hyperprolactinemia associated with paliperidone use (2).

In our case, hyperprolactinemia does not accompany galactorrhea resulting from paliperidone use. No galactorrhea case that is not accompanied by hyperprolactinemia associated with paliperidone use was found in retrospective literature reviews.

2. Case report

35-year old female patient diagnosed with bipolar disorders has been followed for 8 years. She has been hospitalized for 5 times due to manic episode resulting from the discontinuation of medication. She has been taking medication regularly, and followed through policlinics for 2 years. Still taking Valproic acid at a dose of 1000 mg, the patient has begun to worry that she might be hurt by her relatives. Her relatives state that her tolerance threshold decreased and she sometimes had temper tantrums. The manic episodes requiring hospitalization have started following the similar hypomanic scene existing during polyclinic application.

In her psychiatric examination, she looked her age, her dressing style was elaborate and in line with her socio-cultural level, her affection was slightly elevated, her mood was dysphoric, her stream of consciousness was normal, her vegetative functions were natural, and overly thought persecutory delusions were detected in her normal thought content.

In consequence of the clinic assessments carried out, the patient was thought to have hypomanic episodes, and 6 mg paliperidone treatment was initiated. Weekly controls were

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suggested. The patient complained at her last outpatient application (3rd week) about a feeling of fullness and pain in breasts as well as lactation and menstrual delays.

With the beginning of paliperidone treatment, a feeling of fullness in both breasts developed within 10 days, and lactation was defined for the last 3 days. The expected menstrual bleeding of the patient who had a normal menstrual cycle was delayed 7 days.

Galactorrhea was confirmed with the physical examination carried out. No trauma or stimulant related to breasts was identified in the patient's medical history. Contrary to the expectations, serum prolactin levels were between normal limits. The patient had no complaint about visual field narrowing. Hypophysis MRI was in normal limits.

Since a possible hyperthyroidism might cause galactorrhea, necessary thyroid function tests were required. Moreover, according to the assessment made after the gynecology consultation, uterus was in normal size, cervix was in normal appearance, bilateral ovaries were free and in normal size in the pelvic examination. Gonadal hormones (FSH, LH, E2) were in normal limits, β -hCG was negative (β -hCG<1.20 mIU/mL), uterus was natural in ultrasonography, the thickness of endometrium was 6 mm, and bilateral ovaries were in polycystic appearance. As a result of the endocrinologic and gynecologic assessments, no pathology to explain galactorrhea was detected.

Since galactorrhea was thought to be caused by paliperidone, the medication was stopped. Due to the existent well-being, Valproic Acid and biweekly polyclinic controls were suggested. Galactorrhea disappeared on the 4th day following the discontinuation of paliperidone. With the menstruation of the patient on the 10th day, galactorrhea that was thought to be caused by the medication as well as the other related symptoms completely disappeared.

3. Discussion

In our case, galactorrhea and the other related symptoms observed after the start of paliperidone treatment disappeared completely following its discontinuation. Furthermore, it was identified that the scanning results were in normal limits, there were no any endocrinologic pathologies or any stimulants and/or traumatic events related to breasts. In the light of the available information, galactorrhea and the other related symptoms were thought to be associated with the use of paliperidone.

Galactorrhea is generally associated with the increase in serum prolactin; however, it may be seen in 30% of women with normal prolactin levels (3). In our case, galactorrhea development related to paliperidone use was independent from prolactin use. As a result of our literature reviews, we found two galactorrhea cases independent from prolactin increase. The first one of them developed independently from hyperprolactinemia in a 32-year old female patient diagnosed with agoraphobia with panic disorders in the sixth week following the start of paroxetine treatment, and disappeared on the seventh day following its discontinuation (4).

In the other case, galactorrhea developed independently from prolactin increase in a 45-year old female patient, in the second week of quetiapine treatment for bipolar disorders and manic episodes, and disappeared 72 hours after its discontinuation (5).

As in our case, in both of these cases no additional endocrine pathology was detected, and the results obtained from brain scans were in normal limits.

Since antipsychotics easily pass through the blood brain barrier and part from dopamine receptors in galactorrhea related to hyperprolactin, the effect and the results of hyperprolactinemia do not last long. In galactorrhea independent from hyperprolactinemia and our case as well as the other 2 cases, these effects completely disappeared roughly in 1 week. Moreover, galactorrhea accompanying hyperprolactinemia does not differ from galactorrhea independent from hyperprolactinemia in terms of symptomatology (fullness in breasts, spontaneous lactation, menstrual irregularity etc.). In the light of available data, despite the fact that etiology cannot be explained completely, it is thought that individual sensitivity at receptor level might be important.

We could not encounter galactorrhea case not accompanied by hyperprolactinemia related to paliperidone in the retrospective literature review. Despite the lack of prolactin elevation, the effect of paliperidone should be considered when encountering galactorrhea in patients being treated with these drugs and interventions should be made taking the necessary measures. Despite the fact that galactorrhea and accompanying symptoms might be caused by individual differences, further studies are required in order to explain the related mechanism.

References

1. Stahl MS. Stahl's Essential Psychopharmacology Neuroscientific Basis and Practical Applications. Antipsychotic Agent. Fourth Edition. Cambridge University Press, Cambridge, United Kindom 2013 p.129-236.
2. Skopek M, Manoj P. Hyperprolactinaemia during treatment with paliperidone. *Australas Psychiatry* 2010; 18: 261-263.
3. Kaye TB. Hyperprolactinemia. Causes, consequences, and treatment options. *Postgrad Med* 1996; 99: 265-268.
4. Chakraborty S, Sanyal D, Bhattacharyya R, Dutta S. A case of paroxetine-induced galactorrhoea with normal serum prolactin level. *Indian J Pharmacol* 2010; 42: 322-323.
5. Mushtaq S, Khan S, Patel H. Quetiapine-induced galactorrhoea with normal prolactin level in an adult female patient. *Prim Care Companion CNS Disord.* 2012; 14(2): doi 10.4088 / PCC.11101284.