

The first male case with fluoxetine induced hair loss and review of the literature

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Abstract. – **OBJECTIVE:** Fluoxetine is the drug of choice in the treatment of depression. It is widely preferred due to fewer side effects and greater tolerability. Hair loss is a frequent adverse effect that may occur by psychotropic drug use and that can remit by its cessation.

PATIENTS AND METHODS: We present the diagnosis and treatment of a 26-year-old male patient. He was diagnosed with depression without psychotic features according to the DSM-V criteria and was administered fluoxetine in a dose of 20 mg/day.

RESULTS: Six weeks after the initiation of the fluoxetine treatment, the patient reported hair loss in the frontal area of the skull. These complaints regressed after cessation of drug.

CONCLUSIONS: Hair loss appears to be a rare side effect of fluoxetine-based treatment. Dermatologists and psychiatrists must be informed about this adverse side effect. There might be differences in the risk of hair loss between the various SSRIs and the risk might be higher in female than in male. This male patient was the first case as far as we know in the literature. It should be kept in mind that hair loss may be observed in patients treated with fluoxetine and should be questioned in both male and female.

Key Words:

Fluoxetine, Hair loss, Side effect, Male, Depression.

Introduction

Hair loss is frequently associated with psychological stress. Hair loss case reports related to drug use have been published before. Hair loss due to psychotropic drugs occurs within a few months after taking the drug. It can be local or widespread and is reversible after cessation of treatment. Cases of hair loss due to sertraline^{1,2},

citalopram³, escitalopram⁴, fluvoxamine⁵, venlafaxine⁶, paroxetine⁷, mirtazapine⁸ have been reported. In literature, there have been case reports of female patients who previously used fluoxetine and experienced hair loss. But we present diagnosis and treatment of a male patient who was first case that was presented and exhibited reversible hair loss after 6 weeks administration of fluoxetine 20 mg/day. These complaints regressed after cessation of drug.

Case Report

A 26-year-old man patient, not known to have a systemic disease, came to psychiatric outpatient clinics due to loss of motivation, feeling upset, hopelessness, pessimism, feeling sleepy all day. In psychiatric examination, affect was depressive, mood was compatible with affect. He did not have any problems of appetite or sleeping. He was diagnosed with depression according to the DSM-V criteria and was administered fluoxetine in a dose of 20 mg/day. Six weeks after the initiation of the fluoxetine treatment, the patient reported hair loss in the frontal area of the skull. Although he had hair loss, he continued his treatment for 4 months. He consulted the dermatology clinic, and he was diagnosed with hair loss of unknown cause. Laboratory tests and dermatological examination did not reveal any pathological causes. Because a drug-related event was suspected, fluoxetine was discontinued 4 months later, and hair loss ceased. The patient was concerned and after his psychiatrist's recommendation, he stopped the uptake of the fluoxetine. In the control examination 4 weeks after discharge, patient's hair loss reversed in 2 weeks and depressive symptoms were in remission. The patient has provided informed consent for this report.

Table I. Case studies about fluoxetine and hair loss ordered by the year of publishing.

Authors	Diagnosis	Dose of fluoxetine (mg/day)	Onset of hair loss(week)
Gupta, Masand ⁹ (1991) Prim care companion J clin psychiatry	MDD	20	2
Ananth, Elmishaugh ²⁰ (1991) Can J Psychiatry	Two cases a.OCD b.OCD	a.80 b.60	a.6 b.12
Jenike ²¹ (1991) Am J Psychiatry	OCD	40	18
Ogilvie ¹³ (1993) Lancet	Two cases a.MDD b.MDD	a.20 b.20	a.2 b.3
Mareth ¹² (1994) J Clin Psychiatry	MDD	20	24
Seifritz et al ¹¹ (1995) Can J Psychiatry	BD	20	5
Bhatara et al ¹⁰ (1996) J Clin Psychiatry	MDD	20	7
O'Bryan, Albanese ¹⁴ (2004) PrimCare Companion J Clin Psychiatry	GAD	20	12
Rocha, Malheiros ¹⁹ (2006) Rev Bras Psiquiatr	GAD	20	5
Miniksar, Pelin ¹⁵ (2018) Psychopharmacology congress	ASD	20	4
Türkoğlu ²² (2013) Clinic Psychopharmacology	GAD+MDD	40	5
Çam ¹⁷ (2014) Anatolian Journal of Psychiatry	MDD	20	4
Mermi ¹⁶ (2014) Düşünen Adam the journal of psychiatry	MDD	20	2
Öztürk ¹⁸ (2014) 50 th National Psychiatry ongress	GAD+MDD	20	8

MDD: Major depressive disorder, OCD: Obsessive compulsive disorder, BD: Bipolar disorder, GAD: Generalized anxiety disorder, ASD: Acute stress disorder.

Discussion

This patient had no other physical problems and did not take any other medication. He started to suffer hair loss secondary to psychotropic medication. Also, as another point that may be interesting in terms of etiology, it is remarkable that the majority of reported cases are female. The difference in our case was that he was male. Naranjo adverse reaction scale score was “7” which means “probable”.

Fluoxetine is commonly used for the treatment of major depressive disorder, anxiety disorder and obsessive-compulsive disorder. Mostly, fluoxetine is well tolerated. The main side effects of fluoxetine are nausea, nervousness, insomnia, headache, and sexual dysfunction. Among the dermatological side effects reported with fluoxetine use, it was stated that rashes were the most common. Hair loss is a rare side effect of using SSRIs. Cases of hair loss due to sertraline^{1,2}, citalopram³, escitalopram⁴, fluvoxamine⁵, venlafaxine⁶, paroxetine⁷, mirtazapine⁸ have been reported in the literature. Literature search in PubMed and Google schol-

ar by using the keywords “hair loss”, “alopecia” and “fluoxetine” revealed fourteen other similar case reports. Women have a heightened risk for SSRI-induced hair loss as compared with male counterparts and the risk of hair loss is different across SSRIs.

Gupta et al⁹, Bhatara et al¹⁰, Seifritz et al¹¹, Mareth et al¹², Ogilvie et al¹³, O'Bryan et al¹⁴, Miniksar et al¹⁵, Mermi et al¹⁶, Çam et al¹⁷, Öztürk's et al¹⁸, Rocha et al¹⁹ case reports similar sides are all the cases were female and developed hair loss with 20 mg/day fluoxetine dose and approximately between two to twelve weeks after starting fluoxetine, hair loss was observed. Ananth et al²⁰ reported two female cases who were diagnosed with obsessive compulsive disorder. In the first case, a dose of fluoxetine 80 mg/day was administered, and hair loss was observed after six-week period of treatment. In the second case, she was treated with 60 mg/day of fluoxetine and she developed hair loss three months later. In the literature, hair loss that occurred secondary to fluoxetine treatment was initiated between two and twelve weeks. But Jenike²¹ reported a 53-year-old female patient suf-

fering from severe obsessions and after treatment with fluoxetine 80 mg/day, reported huge clumps of hair five months later. Also, Mareth et al¹² reported a female patient who was treated 20 mg/day of fluoxetine and developed hair loss in the sixth month. Türkoğlu et al²² described a 16-year-old female adolescent who was diagnosed generalized anxiety disorder and major depression. Her fluoxetine regimen started with 10 mg daily and gradually increased to 40 mg/day. Approximately five weeks after starting fluoxetine, she and her mother noticed that more scalp hair appeared in her comb and on her pillow (Table I).

The mechanism of hair loss due to SSRIs has not been elucidated. It has been suggested that hair growth control is associated with the sympathetic nervous system, dopaminergic treatments may cause hair loss, and fluoxetine may cause hair loss through dopamine reuptake inhibition. It has also been shown that human skin could produce serotonin and transform it into melatonin. Melatonin has in turn been implicated in hair growth cycling. It is, therefore, possible that treatments that interfere with serotonin homeostasis in the skin may alter the balance between hair growth and hair shedding. A link between serotonin and hair loss is further supported by the finding of increased whole blood serotonin concentrations among such patients. Clinical presentation is often inadequate to confirm hair loss secondary to a psychotropic medication. The only way to validate the suspicion is to stop the medication, verify improvement, and then reinstitute drug therapy. Before starting antidepressant treatment, clinicians should definitely learn about the drugs used by the patient in the past and their side effects. Questioning about metabolic, sexual and digestive system side effects as well as dermatological side effects and hair loss and informing patients will increase treatment compliance while using medication. It should be kept in mind that hair loss may be observed in patients treated with fluoxetine.

Conclusions

Hair loss appears to be a rare side effect of fluoxetine-based treatment. Dermatologists and psychiatrists must be informed about this adverse side effect. There might be differences in the risk of hair loss between the various SSRIs and the risk might be higher in female than in male. It should be kept in mind that hair loss may be observed in patients treated with fluoxetine and

should be questioned in both male and female. Findings on discontinuation of fluoxetine and ensuing recovery of hair loss lend further credence to the assumption that hair loss is a side effect of fluoxetine. Further investigation is warranted so as to shed light on the causes of this side effect.

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Conflict of Interest

The Authors declare that they have no conflict of interests.

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