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Fluoxetine- and Sertraline-Related Hair Loss in a Teenager: A Case Report

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ÖZET:

Bir ergende fluoksetin ve sertralin ile ilişkili saç dökülmesi: Olgu sunumu

Selektif serotonin reuptake inhibitörleri (SSRI) yaygın olarak kullanılan antidepresanlardır. Tüm SSRI'lar ile ilişkili zaman zaman yaygın saç dökülmesi bildirilmiştir. SSRI'ların saç dökülmesi riskiyle ilişkili farklı oranlar bildirilmiş ve riskin kadınlarda daha fazla olduğu belirtilmiştir. Psikotropların saç kaybına yol açma mekanizması henüz tamamen aydınlatılamamıştır. Bu olgu sunumunda, ilk olarak fluoksetin ve sonrasında sertralin başlanmasının ardından özgeçmişinde ve aile öyküsünde olmadığı halde, yaygın saç dökülmesi gözlenen bir ergeni bildiriyoruz. Bizim bilgilerimize göre bu olgu, hem fluoksetin hem de sertralin ile yaygın saç dökülmesi görülen, ardından tedavisine venlafaksin ile devam edilen ve saç dökülmesi duran ilk olgudur. SSRI tedavisi sırasında hastada saç kaybı gelişir ve zamansal ilişki olarak akla yatkın görünürse, ilaç yan etkisinden şüphe edilmeli, ya doz düşürülerek ya da başka bir antidepresana geçilerek tedaviye müdahale edilmelidir.

Anahtar sözcükler: Fluoksetin, sertralin, alopesi, yan etkiler

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ABSTRACT:

Fluoxetine- and sertraline-related hair loss in a teenager: a case report

Selective serotonin reuptake inhibitors (SSRIs) are widely prescribed antidepressants. All SSRIs have occasionally been associated with alopecia or hair loss. There might be differences in the risk of alopecia between the various SSRIs, and the risk might be higher in women than in men. The pathological mechanism of hair loss due to psychotropic medications has not yet been fully elucidated. Here, we present an adolescent female with no personal and family history of alopecia, who developed common alopecia with consecutive fluoxetine and sertraline treatments. The hair loss stopped with a venlafaxine regimen. To our knowledge, this is the first report of hair loss due to both fluoxetine and sertraline, which then recovered with venlafaxine treatment. If a patient develops hair loss during SSRI treatment and the temporal relationship seems plausible, an adverse drug reaction should be suspected and changing the treatment to another antidepressant or possibly decreasing the dose should be considered.

Key words: Fluoxetine, sertraline, alopecia, side effects

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INTRODUCTION

Selective serotonin reuptake inhibitors (SSRIs) are widely prescribed antidepressants. The introduction of fluoxetine in 1988, followed by other SSRIs, which have a much more favorable profile of adverse effects, has significantly broadened the horizon for pharmacological treatment of disorders of mood and anxiety. Although depressive disorders were the initial indications for these medications, they are effective in a wide range of disorders, including eating disorders, panic disorder, obsessive-compulsive disorder and borderline personality disorder (1).

Most people have about 100,000 scalp hairs. Shedding of 100 to 150 hairs per day is normal. The term alopecia is considered to encompass all forms of hair loss ranging from simple defluvium to total loss of body hair. Thinning of the hair is difficult to detect clinically until about 25–50% of the hairs on the scalp are lost. Hair loss is, therefore, often a subjective complaint by the patient, who notices an

increased loss of hair when brushing or washing the hair (2).

Hair loss may be frequently caused by medicines as a side effect. Hair loss is a rare side effect of psychotropic agents (2). Alopecia occurs in about 10% of persons managed on lithium, up to 12% of persons on valproate and less than 6% of individuals on carbamazepine (3). Tricyclic antidepressants, maprotiline, trazodone, and virtually all the new generation of antidepressants may rarely lead to alopecia. The same applies to haloperidol, olanzepine, risperidone, clonazepam, and buspirone, but not to other neuroleptics, benzodiazepines or barbiturates, selected antihistamines, and antiparkinson drugs (4). All SSRIs have occasionally been associated with alopecia or hair loss. It is believed that most drug-induced alopecia is due to the conversion of growing hair follicles into resting hair follicles (4). Physicians often don't enquire about this side effect and therefore may not recognize it. Although patients recognize this side effect, they usually don't connect hair loss with the drug they use. For these reasons, the real prevalence of hair loss due to psychotropic drugs is not obvious (5). Dermatological side effects may occur such as redness, rash or sweating with all the SSRIs. Hair loss may progress to alopecia. Hair loss is a potential but an infrequent side effect (4). Fluoxetine (6,7), sertraline (8) and paroxetine (9) have been reported to cause hair loss in a very small minority of patients.

The mechanism of SSRI-induced hair loss has not been elucidated. There are 2 stages of alopecia, anagen and telogen effluvium, both of which may be associated with medication-related alopecia. Telogen effluvium may be a consequence of a large number of medications including psychotropic drugs.(10). Side effects of medications on hair are not limited to loss only since they might also change the color of the hair (11).

Here we present an adolescent, who developed diffuse alopecia during both fluoxetine and sertraline treatment with no personal and family history of alopecia. Afterwards, sertraline and fluoxetine were discontinued and hair loss resolved within three weeks.

CASE

A.K. a 16-year-old female was referred to our outpatient clinic with complains of irritability, depressed mood, markedly diminished interest, fatigue, psychomotor agitation, recurrent thoughts of death, diminished concentration, sleep disturbance, lack of appetite, significant weight loss, restlessness, muscle tension, excessive worries about school, future, health of family and reportedly drinking alcohol to "get drunk" in the several months prior to the evaluation. She had been diagnosed with DSM-IV generalized anxiety disorder and major depression. She did not fulfill the DSM-IV criteria for any other Axis I or personality disorder. She had a normal physical examination and no history of significant medical illness. She had not been treated previously with any other serotonergic antidepressant. Her fluoxetine regimen started with 10 mg daily and gradually increased to 40 mg/day. Ten weeks later, symptoms of generalized anxiety disorder and major depression were dramatically reduced on this regimen. Approximately five weeks after starting fluoxetine she and her mother noticed that more scalp hair appeared in her comb and on herpillow. Scalp pain didn't accompany with this noncicatrical hair loss. She was found to have noncicatricial alopecia in patches around the frontal and temporal areas of the scalp. She was not taking any other medication and had no history of allergies. In her personal and familial history there was no history of hair loss at early ages. She consulted the Dermatology Clinic and she was diagnosed with hair loss of unknown cause. The results of hematological investigation and renal, liver and thyroid function tests revealed no abnormality. Thyroid antibodies and antinuclear antibodies were not found. Serological tests confirmed that A.K. did not have syphilis. Rheumatoid factors were not present. Because a drug-related event was suspected, fluoxetine was discontinued 3 months later. A. K's hair loss ceased and her hair returned to normal thickness. Four weeks after stopping fluoxetine treatment, due to an increase of symptoms, A.K. was prescribed sertraline 50 mg/day by her

psychiatrist. Within 1 week, the patient's hair loss recurred and she stopped taking sertraline. A.K. reported renewed hair growth. Four weeks later when symptoms increased again, a venlafaxine regimen was started with a dose of 37.5 mg which was gradually increased to 150 mg/day. Ten weeks later, the symptoms of generalized anxiety disorder and major depression were dramatically reduced on this regimen, her hair loss ceased and her hair returned to normal thickness.

DISCUSSION

Information about drug induced alopecia is sparse and limited to case reports in the medical literature. Drug induced hair loss is more common than many clinicians realize. Few details are available and it is often difficult to confirm hair loss secondary to drug use. Awareness about this drug-induced side effect is important; however, it is not possible to know exactly the prevalence of hair loss with SSRI treatment. Also it is difficult to diagnose hair loss due to drug use; there is no special method for precise diagnosis. The only way to confirm the diagnosis is to stop the medication and to observe hair regrowth. When the same drug is restarted, the recurrence of hair loss is the confirmation of drug induced hair loss (5). For differential diagnosis, it is necessary to consider trichotillomania, hypothyroidism, hyperthyroidism, hormonal pathologies of the hypothalamic-pituitary-gonadal axis, iron, copper and zinc deficiencies and to investigate the use of other drugs (antihypertensive agents, anticoagulants, anticonvulsants, non-steroidal anti-inflammatory drugs, antiulcer agents) related to hair loss (3). For this reason the other conditions associated with hair loss must be eliminated. In our case, we eliminated other conditions that can cause hair loss. Then we discontinued the medication, to observe whether or not the hair loss was due to fluoxetine and sertraline.

Pathological mechanism of hair loss due psychotropic drugs have not yet been fully elucidated. Direct toxic effects of psychotropic drugs to the hair follicle matrix must be considered as the reason of hair loss in this case (12). The mechanism of drug-induced hair loss is called telogen effluvium and involves a premature interruption of growth with an early entry of anagen follicles into the resting phase. Hair loss tends to occur within three months of initiating therapy but may be further delayed (2,4). Drug-induced hair loss generally recovers within two months after discontinuation of the drug (2). 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 (13). Evidence in favor of an effect of SSRIs on hair growth has been presented from a small number of patients with alopecia areata and concomitant depression or generalized anxiety, who exhibited objective clinical improvement of their alopecia following 3 months of treatment with citalopram (14). Alternative explanations for the improvement of alopecia in these cases include spontaneous improvement or the possibility that improvement was secondary to an antidepressant effect. A link between serotonin and alopecia areata is further supported by the finding of increased whole blood serotonin concentrations among such patients (15). Also as another point that may be interesting in terms of etiology, it is remarkable that the majority of reported cases are women. Alopecia induced by drugs is generally characterized by a diffuse, nonscarring hair loss and by its reversibility after stopping treatment. Dosage reduction, drug discontinuation or pursuing therapy with another agent remains the most promising management option for hair loss (16).

Several serotonin reuptake inhibitors can also cause hair loss on rare occasions. Fluoxetine,the most frequently prescribed antidepressant, was reported in 1995 to have precipitated alopecia in 725 cases, sertraline in 46 instances and paroxetine in 30 subjects (17). Bourgeois published 2 cases of hair loss due to treatment with sertraline. The first case reportedly noticed apparent hair loss approximately six weeks after starting sertraline 50 mg.. In this case, when sertraline was replaced with

paroxetine, hair loss stopped and the hair returned to normal thickness. The second case, ea female patient, who developed sertraline-related alopecia (150 mg/day), discontinued the offending drug two month later and wasswitched to trazodone therapy with no recurrence of hair loss (8). In Bhatara's case report, treatment was started with fluoxetine and treatment was continued with sertraline because of hair loss. Hair loss stopped with sertraline treatment (18). These data suggest that the pathophysiological cause of hair loss due to the use of antidepressant drugs is not yet fully identified. SSRI-induced hair loss is associated with an individual, rather than a drug-specific, sensitivity. When an effective psychotherapeutic agent causes alopecia and no appropriate alternative can be provided, the informed patient and physician should discuss the risks and benefits of continuing, stopping or changing the dose or medication. The advantages and disadvantages of maintaining the drug must be reviewed (4). In our case, a few weeks after stopping both fluoxetine and sertraline treatment and starting venlafaxine, A.K.'s hair loss ceased and her hair returned to normal thickness. Hair loss is a rare side effect of SSRIs but it is considered to be particularly traumatic for both men and women, This side effect is important and it is a problem that disrupts compliance (5). Therefore, the occurrence of hair loss must be questioned along with other side effects and necessary measures must be taken. Future clinical experience and more research may further clarify drug-induced hair loss and offer new therapeutic recommendations.

In conclusion, hair loss appears to be a rare adverse reaction to SSRIs and it is reversible. There might be differences in the risk of hair loss between the various SSRIs and the risk might be higher in women than in men (14). Despite the presence of hair loss with fluoxetine and sertraline treatments, but not with venlafaxine, the cause of hair loss has not yet been fully elucidated There is a need to conduct further research on this topic.

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