Essay: Hair loss associated with sertraline: a case report
February 4, 2016 by Essay Sauce

Abstract

Introduction:

Selective serotonin reuptake inhibitors (SSRIs) are widely overlooked as antidepressants. Associations of SSRIs with hair loss are rare and limited to few case reports. In this case study, a patient developed diffuse hair loss during sertraline treatment.

Case Presentation
Mr A, a 47-year-old married with a diagnosis of panic disorder according to the DSM-V criteria and specific phobia (claustrophobia). Approximately 8 weeks after starting sertraline, he noticed hair loss. Decreasing the dose of sertraline led to resolution of hair loss within 6 weeks.

Conclusion:

Hair loss related with SSRIs is an infrequently observed adverse effect that may be overlooked. hair loss should also be investigated during control sessions in addition to other side effects as it may damage the patientâ€™s outer appearance and negatively affect his or her adherence to treatment.

Keyword:

Sertraline; Hair Loss; SSRI

Introduction

Selective serotonin reuptake inhibitors (SSRIs) are widely prescribed in psychiatric medicine. SSRIs, first introduced in 1988 with fluoxetine, have an adverse event profile that is very favorable compared to other antidepressant drug classes (and that has improved with later-generation compounds) and have significantly broadened the horizon in psychopharmacological treatment of anxiety and mood and obsessive compulsive disorders [1]. The primary pharmacological characteristic of these drugs is strong and selective inhibition of serotonin reuptake, which is the significant factor in their efficacy for treatment of depression. The positive effect of serotonin reuptake inhibition in depression is far stronger than that actuated by noradrenaline reuptake, alpha 1 adrenergic and muscarinic cholinergic and histamine receptors effects [2].

Hair loss is a side effect rarely observed during use of psychotropic drugs. Hair loss may be both local and widespread in their expansion throughout the scalp. Psychotropic medications are deemed to affect on telogen phase and cause hair loss [3].

It is argued that most drug-induced hair loss is due to the conversion of growing hair follicles into resting hair follicles [3-4]. Shedding of the hair shaft takes place up to 3 months after the initiation of treatment [3].

Most people have about 110,000 hairs on scalp. Shedding 100 hairs per day is normal event. The term alopecia encompasses all forms of hair loss ranging from simple effluvium to total loss of hair. Thinning of the hair is difficult to detecting by clinician until about 25%â€“50% of the hairs on his/her scalp are lost. Hair loss is, therefore, a subjective complaint of the person, who notices an increased hair loss while washing or brushing his/ her hair [3]. Medicines frequently cause hair loss as a side effect, though this side effect is relatively rare with psychotropic agents [3]. Associations of specific serotonin reuptake inhibitors with hair loss are rare and limited to case reports [5]. All SSRIs have rarely been associated with hair loss [4]. Clinicians often donâ€™t ask patients about this adverse effect and therefore may not detect its appearance. Conversely, patients recognize the side effect but generally donâ€™t connect the hair loss with their SSRI they are using. The real prevalence of hair loss due to psychotropic medications is not obvious [6]. As hair loss directly is bad influences on appearance, it can be an important problem for persons; in cases where doctors are overlooking or missing this side effect, patient non-adherence to the SSRI regimen can result. A few case reports exist on hair loss associated with tricyclic antidepressants and SSRIs used in combination [7]. Fluoxetine [8-10], sertraline [5, 11, 12], paroxetine [7], and the serotonin-norepinephrine reuptake inhibitor (SNRI) venlafaxine [13] have been reported to cause hair loss in a small percent of patients. The mechanism of hair loss due to SSRIs has not been elucidated.

In this case study, a patient developed diffuse hair loss during sertraline treatment. This patient had not a family history and not a personal history of alopecia. Decreasing the dose of sertraline led to resolution of hair loss within 6 weeks.
Mr A, a 47-year-old married man with a college diploma, was assessed during a psychiatric consultation after admission in an internal medical ward. During admission, the patient stated that he experienced dyspnea, with multiple attacks and a general hospital admission for the condition over the previous 4 months. Examination of the patient's mental state revealed good self-care with full orientation and cooperation; the patient was conscious. His mood was euthymic and the content of his thought corresponded with his mood. The patient received a diagnosis of panic disorder according to the DSM-V criteria and specific phobia (claustrophobia). He did not fulfill the DSM-V criteria for any other Axis I or Axis II. No prior history of suicide attempts or comorbid alcohol or substance abuse existed. In the absence of any accompanying Axis I pathological mental disorder (e.g., trichotillomania), other psychiatric illness that may cause hair loss were excluded. Physical examination was normal; the patient had a history of asthma (i.e., the already-noted dyspneic episodes). He had not been treated previously with any other SSRIs. His sertraline regimen had been initiated at a dose of 25-mg/day and gradually increased to 100mg daily. 5 weeks later, symptoms of panic attacks were dramatically reduced on this drug regimen along with use of alprazolam. This treatment was associated with a marked response (i.e., significant change on the Clinical Global Impressions-Improvement scale [CGI-I]). Approximately 8 weeks after starting sertraline, he noticed hair loss as he brushed or washed his hair (scalp hair appearing in his comb and pillow). This observation was confirmed by the patient's hairdresser. His hair loss worsened progressively in the following weeks after this initial 8-week period. He had no itching or changes in the scalp; scalp pain didn't accompany this non-cicatricial hair loss. He was not found to have non-cicatricial alopecia in patches around areas of scalp. Other than sertraline and alprazolam, the patient was taking salbutamol; he had no histories of allergies. He denied any changes in diet or in shampoos or soaps used, and was unaware of any drug allergies. In his familial and personal history there was no history of hair loss at early ages. He denied using any herbal or homeopathic remedies or over-the-counter drug products. The patient denied tobacco, alcohol, or caffeine use.

After consultation with the dermatology clinic, the patient received a diagnosis of hair loss with unknown cause. He was referred to a dermatologist, but no other dermatological abnormality was found. The results of hematological assays and renal, liver function tests, and thyroid function tests, erythrocyte sedimentation rate [ESR] and urinalysis revealed no abnormality. Thyroid antibodies and antinuclear antibodies (ANA) for lupus were not found. Serological tests confirmed that he did not have syphilis. Rheumatoid factors were not present. Considering that there was no pre-treatment period for hair loss and the exclusion of other potential causes such as positive family history and organic causes, sertraline use was considered to be a probable cause of the hair loss. With the suspicion of a drug-related adverse event, the dose of sertraline was decreased and reached to 75 mg/day, and a zinc sulfate dose of 50 mg/day initiated. Zinc sulfate was used because chelation of zinc may occur in some cases of hair loss induced by antipsychotics and lead to depletion of zinc levels [3-4]. Zinc levels were not determined in this patient. Zinc sulfate has been advised in the treatment of alopecia, but efficacy has not been established. Over a 4-week period, an increase in hair growth was reported by the patient in areas where hair growth had been affected. It is unknown whether zinc sulfate contributed to regrowth of hair or whether the regrowth results from decreasing the sertraline dose.

Four weeks after decreasing the dosage of sertraline, the patient noticed that progression of hair loss stopped; his hair re-grew within 2 months. After cessation of hair loss, the patient's hair returned to its normal thickness with renewed hair growth.

DISCUSSION

Various clinical conditions cause hair loss, including scalp diseases, systemic or infectious diseases, toxic agents, hormonal imbalances, and psychiatric disorders. Hair loss in the present patient is likely caused by sertraline, since hair loss appeared after increasing the dose of sertraline and improved after dose reduction. 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 hair loss
secondary to drug use is often difficult to confirm [14].

The exact prevalence of hair loss with SSRI treatment has not been determined. In fact, quantifying this prevalence is likely not possible; it is difficult to diagnose hair loss due to drug use, as no special method exists to arrive at this diagnosis. The only way to confirm the diagnosis is to stop the medication and to observe hair regrowth [6]. For the differential diagnosis, it is necessary to consider trichotillomania, hypothyroidism, hyperthyroidism, hormonal pathologies of the hypothalamic-pituitary-gonadal axis, and iron deficiency and to investigate the potential use by a given patient of other drugs related to hair loss (antihypertensive agents, anticoagulants, anticonvulsants, nonsteroidal anti-inflammatory drugs, antiulcer agents) [15]. For this reason, other conditions associated with hair loss must be eliminated during differential diagnosis.

The pathological mechanism of hair loss due to psychotropic drugs has not yet been fully elucidated. The direct toxic effects of psychotropic drugs on the hair follicle matrix must be considered as the reason of hair loss in this case [16]. The mechanism of drug-induced hair loss is termed telogen effluvium and involves a premature interruption of growth with early entry of anagen follicles into the resting phase. Hair loss tends to occur within 3 months of initiating therapy but may be further delayed [3-4]. It has also been shown that human skin can produce serotonin and transform it into melatonin, which has been implicated in hair-growth cycling. Therefore, it is possible that treatments interfering with serotonin homeostasis in the skin may alter the balance between hair growth and hair shedding [17]. These data suggest a pathophysiological cause of hair loss with use of antidepressant drugs that has not yet been fully identified [4]. Given this, it is known that most psychotropic medication causes hair loss in the telogen phase of the hair cycle [4]. Hair loss observed in patients receiving antidepressant drug treatment is potentially related to personal sensitivity rather than the drug administered [5]. Although these drugs have an effect on zinc and selenium chelates, several obstacles has surfaced in explaining this effect, namely the inefficiency of zinc and selenium supplements in treatment and the lack of information on the effect’s cellular mechanism [18]. Most drugs that cause alopecia likely do so by causing the hair follicles to enter the resting phase. Therefore, decreasing the dose (or halting treatment altogether) could potentially reverse this and lead to hair regrowth [3-4].

A variety of serotonin reuptake inhibitors have been shown to cause hair loss, though the side effect is generally rare. The risk of alopecia seems to vary between the different SSRIs [19], and SSRI-induced hair loss is associated with an individual, rather than a drug-specific, sensitivity [4]. sertraline can cause hair loss; sertraline and fluoxetine may have different effects on hair loss due to different dopaminergic effects; other SSRIs have been shown to rarely cause hair loss, etc. Sertraline’s relative potency for dopamine reuptake inhibition is one of its points of differentiation from other selective serotonin reuptake inhibitors such as fluoxetine [20]. The different influence exerted by sertraline and fluoxetine on dopamine reuptake inhibition was identified as a possible reason for the side effect of hair loss. In fact, commonly prescribed prescription drugs (such as dopaminergic therapies) can cause temporary hair loss. In reviewing the literature, there have been reports of hair loss after administration of various antidepressant drugs, including sertraline [12,20].

A total of 27 reports of alopecia were identified in the SWEDIS drug database. As two reports concerned the use of two SSRIs, there was a total of 29 drug-ADR combinations, all but 3 of which were in women (88.9%). The reporting rate for alopecia in Sweden was significantly higher with sertraline compared with citalopram; 20.1 (95%CI 10.7–34.4) reports per million patient-years versus 4.5 (95%CI 1.8–9.3) reports per million patient-years [19].

Bourgeois published 2 cases of hair loss due to treatment with sertraline. The first case reportedly noticed hair loss approximately 6 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, a female patient who developed sertraline-related alopecia (150 mg/day), discontinued the drug 2 months after noticing the side effect and was switched to trazodone therapy with no recurrence of hair loss [11].
Ghanizadeh [2008] reported a woman with a major depressive disorder who complained of diffuse scalp hair loss during treatment with sertraline. This case is unique because the patient had taken fluoxetine without reporting hair loss both before taking sertraline and after discontinuation [20]. Uzun and colleagues [2003] reported that hair loss developed in one case following sertraline administration and ceased within 3 months after drug discontinuation. [5] Turkoglu [2013] reported that extensive hair loss developed with both fluoxetine and sertraline use in one case and then ceased after the patient discontinued these two drugs in favor of venlafaxine [12].

Clinical detection of hair loss is challenging until 25% to 50% of a patient’s hair has been lost. Therefore, hair loss is a subjective complaint reported by the patient and is mostly observed during washing or combing of the hair [3]. Definitively concluding that a given drug causes hair loss also presents specific challenges, as no special method exists for arriving at this diagnosis. Rather, discontinuing a drug (or reducing its dose) is often the only way to establish a causal connection with hair loss [21]. In our case, hair re-grew after the sertraline dose was decreased, indicating that hair loss was induced by sertraline. During differential diagnosis, the following should be considered and ruled out: trichotillomania; hypo- and hyperthyroidism; hypothalamic-pituitary-gonadal axis hormone disorders; iron, copper, and zinc deficiencies; menopause; and use of oral contraceptives and other drugs that potentially cause hair loss, such as antihypertensive, anticoagulant, anticonvulsive, non-steroid anti-inflammatory, and antiulcer drugs [22]. Necessary biochemical and endocrinological examinations were also conducted on our patient, with the aforementioned considerations excluded along with renal and hepatic insufficiency and hepatitis in the process of differential diagnosis. No dermatological disease that could cause hair loss was observed in our case. Observation of hair growth following the exclusions of differential diagnoses and the lowering of the sertraline dose led us to conclude that hair loss in our case was related to sertraline. In terms of etiology, another interesting point in our case is that, while the majority of reported cases of antidepressant-induced hair loss are in women, our case study is in a middle-aged man and is therefore atypical in terms of gender; in Hedenmalm [2006], all except 3 cases were in women [19]. The previously published case reports on SSRIs and alopecia also predominantly reviewed cases in women [7, 9, 11, 23-24, 25-26]. It is possible that women may be more preoccupied with their hair and more prone to report hair loss to their physicians. Hair loss may also be more noticeable if the hair is long; some men already have a limited amount of hair. Despite these considerations, it is also plausible that women have an increased risk of SSRI-induced alopecia compared with men, even after correcting for the fact that more women than men are treated with SSRIs [19].

Drug-induced hair loss generally resolves (with recovery of hair growth) within 2 months after discontinuation of the drug [3]. 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. Hair loss may be a rare side effect of SSRIs, but it is considered particularly traumatic for both men and women [6]. Necessary measures must be taken to obviate this side effect when it surfaces, including review of the advantages and disadvantages of maintaining treatment with the drug potentially causing the side effect. Significant hair loss should be monitored in treatment because it may lead to non-adherence and relapse. Future clinical experience and more research may further clarify drug-induced hair loss and offer new therapeutic recommendations.

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 [27].

Conclusion

Hair loss related with SSRIs is an infrequently observed side effect that may be overlooked. We believe that hair loss should also be investigated during control examinations in addition to other side effects as it may damage the patient’s outer appearance and negatively affect his or her adherence to treatment. The cause of this hair loss has not yet been fully elucidated; studies including larger patient groups that aim to explain the
potential mechanism of hair loss are required. Further investigation is needed to determine the scope of this troubling side effect.

References:


19. Hedenmalm K, Sundstro¨m A and Spigset O: Alopecia associated with treatment with selective serotonin


About Essay Sauce

View all posts by Essay Sauce

...(download the rest of the essay above)
Latest reviews:

- Medicine essays
  - Smart Arcade Car Spare Parts Company – car spare parts system
  - Finite element formulation

Search for student essays:

Search ...

About EssaySauce, the student essay site:

EssaySauce.com is a free resource for students, providing thousands of example essays to help them complete their college and university coursework. Students can use our free essays as examples to write their own.
Latest student essays:

Ocular disease
HUMAN action recognition
Analysing data production
Desorption study
Surfactants (surface active agents)
Islamic Finance and Its Impact on Customer Satisfaction
Persian gulf
Feminist approach (Bhumika) (notes)
What does it mean to be a Muslim woman in 21st century? (Shari’ah)
Appellate Body’s analysis under section XIV(c)

Student essay categories:

Accounting essays
Architecture essays
Business essays
Computer science essays
Criminology essays
Economics essays
Education essays
Engineering essays
English language essays
English literature essays
Environmental studies essays
Finance essays
Geography essays
Health essays
History essays
Hospitality and tourism essays
Human rights essays
Information technology essays
International Relations
Law essays
Leadership essays
Linguistics essays
Literature essays
Management essays
Marketing essays
Media essays
Medicine essays
Miscellaneous essays
Music Essays
Philosophy essays
Photography and arts essays
Politics essays
Project management essays
Psychology essays
Religious studies and Theology essays
Science essays
Social work essays
Sociology essays
Uncategorized
Zoology essays

Average review:

Overall rating: 0 out of 5 based on 0 reviews.
Q: Is EssaySauce.com free?

Yes! EssaySauce.com is a completely free resource for students. You can view our terms of use here.

Why use Essay Sauce?

The brightest students know that the best way to learn is by example! EssaySauce.com has thousands of great essay examples for students to use as inspiration when writing their own essays.

Is Essay Sauce completely free?

Yes! EssaySauce.com is a completely free resource for students. You can view our terms of use here.

Info:

About
Content policy
Essay removal request
Privacy
Terms of use