CRCP Case Reports in Clinical Practice

Case Report

Journal Homepage: http://crcp.tums.ac.ir

Hair Loss Associated with Sertraline: A Case Report

Seyed Hamzeh Hosseini[1], Hamed Ghazvini[2], Seyedeh Masoumeh Seyedhosseini Tamijani[3], Raheleh Rafaiee[2]*

1. Department of Psychiatry, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran.

2. Department of Neuroscience, School of Advanced Technologies in Medicine, Mazandaran University of Medical Sciences, Sari, Iran.

3. Psychiatry and Behavioral Sciences Research Center, Addiction Institute, Mazandaran University of Medical Sciences, Sari, Iran.

Use your device to scan and read the article online

Citation Hosseini SH, Ghazvini H, Seyedhosseini Tamijani SM, Rafaiee R. Hair Loss Associated with Sertraline: A Case Report. Case Reports in Clinical Practice. 2024; 9(3): 137-140.

Running Title Hair Loss Associated Sertraline

Article info:
Received: May 25, 2024
Revised: June 8, 2024
Accepted: June 21, 2024

Keywords:
Hair loss; Sertraline

ABSTRACT

Sertraline is classified as a selective serotonin reuptake inhibitor (SSRI) that is extensively employed in the management of a range of psychiatric conditions, encompassing major depressive disorder and anxiety disorders. While the overall incidence of hair loss is not extensively documented, it is recognized as a possible cutaneous reaction to SSRIs, including sertraline.

In the present study, we report the case of a 16-year-old Iranian female of Persian ethnicity who had been treated for panic disorder. She developed severe hair loss two weeks post-initiation of treatment with sertraline 50 mg per day. She stopped the medication after two months when she had lost 50% of her hair. The exact mechanism remains unclear, but it is suggested that SSRIs like sertraline may induce hair loss by pushing hair follicles into the telogen phase prematurely, leading to diffuse hair shedding. Management typically involves dose adjustment or discontinuation of sertraline, which has been shown to resolve hair loss in multiple cases. Understanding this phenomenon is crucial for both patients and healthcare providers. Although rare, this side effect can considerably affect a patient's overall quality of life and compliance with therapeutic regimens.

Introduction

Sertraline is classified as a selective serotonin reuptake inhibitor (SSRI) that is extensively employed in the management of a range of psychiatric conditions, encompassing major depressive disorder (MDD) and anxiety disorders in both adults and children [1]. The pharmacological profile of sertraline suggests enhanced serotonergic neurotransmission, contributing to its antidepressant effects without significant anticholinergic or sedative side effects [2]. Clinical studies have demonstrated sertraline's efficacy in treating MDD, showing significant improvement in depressive symptoms compared to placebo [3]. Additionally, sertraline has been explored for other conditions, such as pathological gambling [4] and the prevention of depression recurrence in patients with

* **Corresponding Author:**
Raheleh Rafaiee
Address: *Department of Neuroscience, School of Advanced Technologies in Medicine, Mazandaran University of Medical Sciences, Sari, Iran.*
E-mail: *rachel.rafaie@yahoo.com, r.rafaie@mazums.ac.ir*

diabetes, indicating its versatile therapeutic potential [5].

The drug is well-tolerated across different age groups, with a low incidence of side effects. The side effects include dry mouth and constipation, nausea, headache, sedation and insomnia, decreased libido, and erectile dysfunction, which are frequently reported as the most common side effects [2]. Medical literature indicates hair loss is a potential side effect associated with sertraline. While the overall incidence of hair loss is not extensively documented, it is recognized as a possible cutaneous reaction to SSRIs, including sertraline [6]. Multiple case reports have been published about sertraline as a cause of hair loss [7-10]. Alopecia has been reported among various cutaneous effects of SSRIs, although specific statistics on sertraline-induced hair loss are limited [11]. In clinical trials, sertraline demonstrated a favorable safety profile, with side effects generally not leading to significant discontinuation rates [2].

In a study involving children and adolescents, sertraline was well tolerated, but adverse events, including hair loss, were not specifically quantified [12]. The broader category of SSRIs has been linked to various skin reactions, suggesting that while hair loss may occur, it is not the most common side effect [11]. In the present study, we report the case of a 16-year-old female who had been treated for panic disorder. She developed severe hair loss after being prescribed sertraline.

Case Presentation

We present a 16-year-old Iranian female patient of Persian ethnicity, who is unmarried, and sought consultation at the psychiatry clinic due to severe hair loss attributed to the administration of sertraline. The patient received a diagnosis of panic disorder and was subsequently prescribed sertraline at a dosage of 50 mg per day. Approximately two weeks post-initiation of the treatment regimen, the patient began to experience hair loss.

An assessment of the patient's psychological condition indicated proficient self-management alongside complete orientation and collaboration. The patient was alert; her affect was euthymic, and her thoughts aligned with her emotional state. The patient was diagnosed with panic disorder in accordance with the DSM-V criteria, alongside a specific phobia (agoraphobia). She did not meet the DSM-V criteria for any additional Axis I or Axis II disorders. There was no documented history of suicide attempts or concurrent smoking, alcohol, or substance misuse. In the absence of any coexisting Axis I mental disorder (e.g., trichotillomania), other psychiatric conditions that could potentially result in hair loss were systematically ruled out.

The patient had not previously encountered severe hair loss and exhibited no prior medical history of endocrine disorders or other chronic diseases. There was no familial history of any chronic disease. An extensive evaluation encompassing biochemical profiles, hematological assessments, thyroid function examinations, hepatic function analyses, and results were within normal limits. A dermatological consultant concluded that there was no identifiable etiology for her symptoms.

Subsequently, zinc supplementation was administered to her; however, it failed to demonstrate any significant efficacy. The hair loss persisted, and after two months, she experienced a loss of approximately 50% of her hair, with the remaining strands exhibiting considerable thinning. Ultimately, she reached a level of apprehension adequate to cease the treatment entirely. Consequently, she discontinued the administration of sertraline, yet the hair loss persisted, albeit with diminished severity.

Discussion

We report a case of severe hair loss associated with sertraline. Hair loss associated with sertraline, an SSRI, is a rare but notable side effect that has been documented in several case reports.

Hair loss has been reported in patients taking sertraline, often occurring within weeks of starting treatment. Elyasi reported two cases: a 47-year-old man and a 32-year-old woman, who experienced hair loss after 8 weeks on sertraline, which resolved upon dose reduction [9]. One case report documented a 21-year-old male who experienced hair loss within two weeks of sertraline initiation, which improved after stopping the medication [8].

The exact mechanism remains unclear, but it is suggested that SSRIs like sertraline may induce hair loss by pushing hair follicles into the telogen phase prematurely, leading to diffuse hair shedding [8]. Sertraline's unique profile, including its effects on dopamine reuptake, may contribute to hair loss, as evidenced by cases where patients switched from fluoxetine (another SSRI) without experiencing similar side effects [13]. Sertraline has been shown to inhibit translation initiation, leading to decreased protein synthesis. This reduction can affect hair follicle health, as hair growth relies on robust protein

production [14]. SSRIs, including sertraline, can cause various skin-related side effects, such as alopecia. These reactions may stem from the drug's impact on serotonin pathways, which are involved in hair follicle cycling [11].

In terms of demographic features, the age of patients experiencing hair loss due to sertraline ranges from 21 to 76 years [8, 9]. A systematic review indicated that the broader age range for SSRI-related hair loss spans from 7 to 85 years [15]. A significant majority of patients affected by hair loss while on SSRIs, including sertraline, are female, with reports indicating that 80.3% of cases are women [15]. In specific case reports, both male and female patients were documented, highlighting that while females are more commonly affected, males also experience this side effect [8, 9].

Management typically involves dose adjustment or discontinuation of sertraline, which has been shown to resolve hair loss in multiple cases [16]. The distress caused by hair loss can lead to poor medication adherence, emphasizing the need for monitoring this side effect [17]. Evidence suggests that switching from sertraline to another SSRI, such as fluoxetine or duloxetine, may alleviate hair loss symptoms, as indicated by patient experiences [13]. For instance, a case report indicated that a patient experienced hair loss on escitalopram, which resolved after switching to duloxetine [18].

Conclusion

Understanding this phenomenon is crucial for both patients and healthcare providers. This side effect, although rare, possesses the potential to considerably affect a patient's overall quality of life and compliance with therapeutic regimens. Incorporating a balanced, mineral- and vitamin-rich diet may support hair health, although specific studies on this in the context of sertraline are limited.

Acknowledgments

The authors wish to thank the patient in this research. Moreover, they thank Mazandaran University of Medical Sciences.

Authors' contributions

S.H.H. designed and directed the study. R.R. collected the data and drafted the manuscript. H.GH. and S.M.S.H.T aided in interpreting the results and worked on the manuscript. All authors discussed the results and contributed to the final manuscript.

Ethical Considerations

Ethical Statement

This study was designed based on the ethical principles of the Declaration of Helsinki (2008) for medical studies involving humans. The local Ethics Committee affiliated with the Mazandaran University of Medical Sciences has approved this study (Ethical Registration No.: IR.MAZUMS.REC.1403.280).

Consent for Publications

Written informed consent was obtained from the patient, for the publication of this case report and any data.

Availability of supporting data

Not applicable.

Compliance with ethical guidelines

There were no ethical considerations to be considered in this article.

Funding

No funding was received to assist with the preparation of this manuscript.

Conflict of Interests

The authors declare no conflict of interest.

References

[1] Jane Garland E, Kutcher S, Virani A, Elbe D. Update on the Use of SSRIs and SNRIs with Children and Adolescents in Clinical Practice. J Can Acad Child Adolesc Psychiatry. 2016 Winter;25(1):4-10.

[2] Hamon M, Bourgoin S. Pharmacological profile of antidepressants: a likely basis for their efficacy and side effects? Eur Neuropsychopharmacol. 2006;16:S625-S32. https://doi.org/10.1016/S0924-977X(06)70008-6

[3] Holper L, Hengartner MP. Comparative efficacy of placebos in short-term antidepressant trials for major depression: a secondary meta-analysis of placebo-controlled trials. BMC Psychiatry. 2020 Sep 7;20(1):437. https://doi.org/10.1186/s12888-020-02839-y

[4] Mestre-Bach G, Potenza MN. Pharmacological management of gambling disorder: an update of the literature. Expert Rev Neurother. 2024 Apr;24(4):391-407. https://doi.org/10.1080/14737175.2024.2316833

[5] Van Tran H, Tran HNB, Ngo TH, Nguyen KT. Depression in type 2 diabetes mellitus: Prevalence, characteristics, associated factors, and treatment outcomes. eClinicalMedicine. 2024;16:100194. https://doi.org/10.1016/j.endmts.2024.100194

[6] Warnock JK, Morris DW. Adverse cutaneous reactions to antidepressants. Am J Clin Dermatol. 2002;3(5):329-39. https://doi.org/10.2165/00128071-200203050-00005

[7] Turkoglu S. Fluoxetine-and sertraline-related hair loss in a teenager: a case report. Psychiatry Clin Psychopharmacol. 2013;23(1):77-80. https://doi.org/10.5455/bcp.20120928030857

[8] Kıvrak Y, Yağcı İ, Üstündağ MF, Özcan H. Diffuse Hair Loss Induced by Sertraline Use. Case Rep Psychiatry. 2015;2015:703453. https://doi.org/10.1155/2015/703453

[9] Elyasi F. Hair loss associated with sertraline: Two case reports and review. Iran J Psychiatry Behav Sci. 2017;11(1):e4000. https://doi.org/10.5812/ijpbs.4000

[10] Bourgeois JA. Two cases of hair loss after sertraline use. J Clin Psychopharmacol. 1996 Feb;16(1):91-2. https://doi.org/10.1097/00004714-199602000-00024

[11] Krasowska D, Szymanek M, Schwartz RA, Myśliński W. Cutaneous effects of the most commonly used antidepressant medication, the selective serotonin reuptake inhibitors. J Am Acad Dermatol. 2007 May;56(5):848-53. https://doi.org/10.1016/j.jaad.2006.10.020

[12] Wagner KD, Ambrosini P, Rynn M, Wohlberg C, Yang R, Greenbaum MS, et al. Efficacy of sertraline in the treatment of children and adolescents with major depressive disorder: two randomized controlled trials. JAMA. 2003 Aug 27;290(8):1033-41. https://doi.org/10.1001/jama.290.8.1033

[13] Ghanizadeh A. Sertraline-associated hair loss. J Drugs Dermatol. 2008 Jul;7(7):693-4.

[14] Lin CJ, Robert F, Sukarieh R, Michnick S, Pelletier J. The antidepressant sertraline inhibits translation initiation by curtailing mammalian target of rapamycin signaling. Cancer Res. 2010 Apr 15;70(8):3199-208. https://doi.org/10.1158/0008-5472.CAN-09-4072

[15] Pejcic AV, Paudel V. Alopecia associated with the use of selective serotonin reuptake inhibitors: Systematic review. Psychiatry Res. 2022 Jul;313:114620. https://doi.org/10.1016/j.psychres.2022.114620

[16] Uzun O, Cansever A, Ozgen F. Hair loss due to sertraline use: a case report. Psychiatry Clin Psychopharmacol. 2003;13:27-9.

[17] Gupta S, Masand PS. Citalopram and Hair Loss. Prim Care Companion J Clin Psychiatry. 2000 Apr;2(2):61-2. https://doi.org/10.4088/PCC.v02n0208d

[18] Kocbiyik S, Batmaz S, Turhan L, Yuncu OA, Caykoylu A. Alleviation of alopecia after switching from escitalopram to duloxetine: a case report. Dusunen Adam J Psychiatry Neurol Sci. 2016;29(1):76. https://doi.org/10.5350/DAJPN2016290108