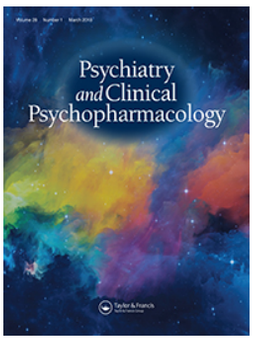

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CASE REPORT

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Alopecia associated with agomelatine use: a case report

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ABSTRACT

Drug-induced alopecia, characterized by non-scarring hair loss of scalp and body, is a rare side effect of psychotropic drugs. It has previously been reported with the different antidepressant medications, but has not been described with agomelatine. Agomelatine is an antidepressant with a novel mechanism of action and fewer side effects. Here, we report a 31-year-old male patient with diffuse hair loss induced by agomelatine use and improved by discontinuation the drug. Because antidepressant-induced hair loss is relatively rare, many clinicians may not pay attention for this side effect. As far as we know, this is the first published case report of alopecia associated with agomelatine.

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Agomelatine; alopecia; antidepressant; hair loss; non-scarring; side effects; skin lesions

Introduction

Antidepressant drugs may cause skin lesions such as urticaria, photosensitivity, alopecia, pruritus, eruptions, pruritus, acne, and dryskin. This type of dermatological side effects have been most frequently reported with escitalopram, sertraline, tricyclic antidepressants, and venlafaxine use [1]. Agomelatine, which is known with have fewer side effects from other antidepressants, is an antidepressant with a novel mechanism of action. Agomelatine that represents an innovative approach to treating depression is a selective melatonergic MT1/MT2 receptor agonist and serotonin 5-HT2c and 5-HT2b receptor antagonist [2]. It is thought that antidepressant activity of agomelatine is associated with the synergy between both types of receptors, which are parts of the circadian rhythm, while generally antidepressants act via the inhibition of the reuptake of serotonin and noradrenaline and result in increases in serotonin and noradrenaline in the central nervous system [3]. Agomelatine has shown to be as effective which is similar to that of standard antidepressants in patients with major depressive disorders [4]. It was reported to improve disturbed sleep-wake cycles throughout the night in patients with depressive disorders and low risk of sexual side effects, insomnia, and withdrawal symptoms on discontinuation make it an alternative for the management of depression [5,6].

Alopecia areata is still a poorly understood polygenic and multifactorial autoimmune disease characterized by non-scarring hair loss of scalp and body. Hair loss might be seen in limited or diffuse forms. Limited form may be defined oval, well-rounded, one or more patches on the scalp or body while diffuse form may influence all the scalp named as alopecia totalis or all the body named alopecia universalis [7]. The etiology of alopecia is usually uncertain, but it can be drug-induced. Many psychotropic medications including mood stabilizers, antipsychotics, and antidepressants namely as TCA, SSRI, SNRI can cause hair loss with a heterogeneous clinically presentation [8,9]. In this case report, we present a patient who had agomelatine-induced pervasive hair loss which was recovered following agomelatine discontinuation.

Case

On August 2016, a 31 year-old Turkish man presented to Psychiatry Clinic of Sultan Abdulhamid Han Education and Training Hospital with depressive symptoms including depressed mood, anhedonia, malaise, anorexia, and sleep problems. He had no history of psychiatric treatment. Beck Depression Inventory (BDI) score was 54 in his first visit. He was diagnosed with major depressive disorder according to DSM-5 diagnostic criteria and agomelatine was started 25 mg/day. During second month of treatment, his depressive symptoms were improved and BDI score was 14. But he started to experience oval hairless areas on the scalp since fourth month of the treatment. Physical examination was unremarkable except for the three, oval, well-demarcated hair loss area on the scalp. Laboratory work for blood count, ESR, syphilis, HIV, rheumatoid factor, antinuclear antibody, anti-thyroglobulin antibody, and

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anti-thyroid peroxidase antibody were unremarkable. He was consulted to a dermatologist who noticed alopecia areata. The Naranjo Adverse Drug Reactions Probability Scale (NADRPS) score was 6, that showing a highly probable chance about the alopecia was through the medication [10]. Discontinuation of agomelatine was thought and suggested to the patient. Venlafaxine 75 mg/d was initiated. In the 3th months of venlafaxine treatment, there was no observed hair loss again and the depressive symptoms were improved.

Discussion

We report a case of hair loss in a 31 year-old man suffering from major depressive disorder and treated with agomelatine. To the best of our knowledge, this is the first case related with agomelatine and hair loss.

Alopecia areata is an autoimmune condition of hair loss and its prevalence is about 2% in lifetime [11]. The cases can be diagnosed by well-surrounded patches of hair loss without scarring. Scalp biopsy is typically not necessary for the diagnosis that is often characterized by a lymphocytic infiltrate around the bulb region of the hair follicle [12]. Alopecia areata has a genetic predisposition. Furthermore, drug-induced alopecia suggested that it might be associated with chelation of zinc and selenium, factors affecting the T-cell-mediated inflammatory process and autoimmune process due to role of the psychopharmaceutical's on the monoaminergic pathways, and hirsutism might be related to the elevation of prolactin caused by psychotropic drugs [13–15].

Many drugs can cause alopecia; however, the mechanism has not been fully understood. Normally each hair follicle grows a three-phase cycle: anagen (growth phase, around 4–8 years), then followed by catagen (a transitional phase, around 2 weeks) lasting and then by telogen (a resting phase, around 100 days) [16]. The most likely mechanism of agomelatine-induced alopecia seems to act by inducing premature telogen or resting phase (telogen effluvium), which results in hair loss occurring 2–3 months after starting the treatment [8]. It is not known how agomelatine induced this effect at a molecular level. Drug-induced alopecia can be difficult to research. In this paper, the case presented provide evidence of a probable temporal relationship between agomelatine and alopecia.

Antidepressant-induced alopecia is a rare side effect reported in a limited number of drugs such as fluvoxamine, imipramine, mirtazapine, venlafaxine, fluoxetine, and sertraline [17–20]. But it is difficult to decide whether hair loss is related to these antidepressant use or not and there is no available specific method for the certain diagnosis [21]. A reliable option to definition the causal relationship is the observation of hair loss reduction or disappearance when the treatment is stopped. On the other hand, to verify the diagnosis of drug-induced hair loss, other probable etiological reasons should be excluded and alopecia and drug starting time should be relevant [22]. Furthermore the relationship between emotional stress and hair loss should not be ignored. In the presented case, we eliminated above conditions that may induce hair loss. Then, we stopped agomelatine treatment in order to observe whether hair loss was due to agomelatine or not. Alopecia was considered to be induced by agomelatine use. There was a temporal relationship between alopecia and drug starting time. Hair loss was not observed after drug stopped. We also measured the causal relationship by using NADRPS. In this scale, a score of 9 and over, 5–8, 1–4, 0 is described as certain, likely, potential, and suspicious, respectively [10]. Our patient's NADRPS score was 6 points and hence hair loss was considered as a likely a side effect due to agomelatine use.

Because of antidepressant-induced hair loss is relatively rare, many clinicians may not pay attention for this side effect. As far as we know, our case is first report in the literature.

According to our case, hair loss should be taken into account while using agomelatine for the treatment of depression. Furthermore, most of the patient's may not realize that their hair loss is related to the drug side effect. Further studies are required to determine the prevalence of agomelatine-induced alopecia and to understand the mechanism of relationship.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

[1] Mitkov MV, Trowbridge RM, Lockshin BN, et al. Dermatologic side effects of psychotropic medications. Psychosomatics. 2014;55:1–20.
[2] McAllister-Williams RH, Baldwin DS, Haddad PM, et al. The use of antidepressants in clinical practice: focus on agomelatine. Hum Psychopharmacol. 2010;25:95–102.
[3] Erbas O, Elikucuk B, Solmaz V, et al. Antipsychotic-like effect of agomelatine in a rodent model. J Psychiatry Neurol Sci. 2015;28:140–146.
[4] Korkmaz AA, Algül A, Basoglu C. Physiological approach to neuropsychiatric diseases; role of autonomic nervous system and melatonin. Bull Clin Psychopharmacol. 2009;19:173–182.

[5] Quera Salva MA, Vanier B, Laredo J, et al. Major depressive disorder, sleep EEG and agomelatine: an open-label study. Int J Neuropsychopharmacol. 2007;10:691–696.
[6] Taylor D, Sparshatt A, Varma S, et al. Antidepressant efficacy of agomelatine: meta-analysis of published and unpublished studies. BMJ. 2014;348:g1888.
[7] Dubois M, Baumstarck-Barrau K, Gaudy-Marqueste C, et al. Quality of life in alopecia areata: a study of 60 cases. J Invest Dermatol. 2010;130:2830–2833.
[8] Mercke Y, Sheng H, Khan T, et al. Hair loss in psychopharmacology. Ann Clin Psychiatry Official J Am Acad Clinical Psychiatrists. 2000;12:35–42.
[9] Kimyai-Asadi A, Harris JC, Nousari HC. Critical overview: adverse cutaneous reactions to psychotropic medications. J Clin Psychiatry. 1999;60:714–725. quiz 26.
[10] Naranjo CA, Busto U, Sellers EM, et al. A method for estimating the probability of adverse drug reactions. Clin Pharmacol Ther. 1981;30:239–245.
[11] Mirzoyev SA, Schrum AG, Davis MD, et al. Lifetime incidence risk of alopecia areata estimated at 2.1% by rochester epidemiology project, 1990–2009. J Invest Dermatol. 2014;134:1141–1142.
[12] Petukhova L, Duvic M, Hordinsky M, et al. Genome-wide association study in alopecia areata implicates both innate and adaptive immunity. Nature. 2010;466:113–117.
[13] Potter WZ, Ketter TA. Pharmacological issues in the treatment of bipolar disorder: focus on mood-stabilizing compounds. Can J Psychiatry. 1993;38:51–55.
[14] Gilhar A, Landau M, Assy B, et al. Mediation of alopecia areata by cooperation between CD4+ and CD8+ T lymphocytes: transfer to human scalp explants on Prkdc(scid) mice. Arch Derm. 2002;138:916–922.
[15] Kubota T, Ishikura T, Jibiki I. Alopecia areata associated with haloperidol. Jpn J Geriatr Psychiatry Neurol. 1994;48:579–581.
[16] Tosi A, Misciali C, Piraccini BM, et al. Drug-induced hair loss and hair growth: incidence, management and avoidance. Drug Saf. 1994;10:310–317.
[17] Kıvrak Y, Yağcı İ, Üstündağ MF, et al. Diffuse hair loss induced by sertraline use. Case Rep Psychiatry. 2015;2015:703453.
[18] Baral J, Deakins S. Imipramine-induced alopecia areata-like lesions. Int J Dermatol. 1987;26:198.
[19] Parameshwar E. Hair loss associated with fluvoxamine use. Am J Psychiatry. 1996;153:581–582.
[20] Ogilvie A. Hair loss during fluoxetine treatment. Lancet. 1993;342:1423.
[21] Kuloglu M, Korkmaz S, Kilic N, et al. Olanzapine induced hair loss: a case report. Bull Clin Psychopharmacol. 2012;22:362–365.
[22] Ceylan MF, Yalcin O. Atomoxetine-related hair loss in a teenager: a case report. Bull Clin Psychopharmacol. 2010;20:258–260.