

Hair loss due to methylphenidate use: A case study

Sir,
Stimulant medications are generally safe and effective. The most common side effects of methylphenidate are feelings of nervousness or irritability, sleep problems, loss of appetite, weight loss, headaches, dizziness, drowsiness, stomach pain, nausea, and vomiting. Hair loss is an uncommon side effect of psychotropic agents.^[1]

A 12-year-old boy was referred to our outpatient clinic by his mother who complained of his excessive and inappropriate talking, running, and climbing; difficulties in paying attention to details and finishing schoolwork; being easily distracted; and shifting from one uncompleted activity to another. This behavior had lasted for about 6 years. The boy was diagnosed with attention deficit hyperactivity disorder (ADHD) according to the Diagnostic and Statistical Manual of Mental Disorders-IV criteria. His physical examination was normal, and there was no history of medical illness. The patient was prescribed methylphenidate at 18 mg/day. After 2 weeks of medication, the methylphenidate dosage was increased to 36 mg/day. After 1 month, the patient's mother reported significant improvement in his ADHD symptoms and school-related problems. However, approximately 2 weeks after starting methylphenidate, his mother noticed that he was experiencing diffuse alopecia that increased in severity over a 1-month period. He was not taking any other medications, and there were no indications of early-onset hair loss in his personal and family history. He was referred to a dermatology clinic, and a dermatological examination revealed diffuse hair loss affecting the entire scalp with no patchy areas. Blood work – including complete blood count; biochemical analysis; thyroid function tests; and tests for vitamin B12, folic acid, ferritin, serum iron and total iron-binding capacity, serum zinc, copper levels, hepatitis B surface antigen, hepatitis B surface antibody, hepatitis B e-antigen, anti-HBc IgG, anti-HBc IgM, cytomegalovirus IgM, and Epstein–Barr virus IgM – revealed no abnormalities. Thus, his hair loss was diagnosed to be a result of drug use. Because a drug-related event was suspected, methylphenidate was discontinued, and his hair loss resolved within 1 month. A month later, the patient presented with ADHD symptoms again, and he was prescribed atomoxetine at a dose of 10 mg/day, which was then increased to 40 mg/day. His ADHD symptoms diminished, and he has shown no signs of hair loss with the atomoxetine treatment in the last 4 months.

Diagnosing drug use-associated hair loss is difficult, as it is necessary to first exclude other organic conditions commonly associated with hair loss, such as hypothyroidism,

hyperthyroidism, hormonal pathologies of the hypothalamic-pituitary-gonadal axis, and deficiencies in iron, copper, and zinc.^[2] The only definitive way to diagnose it is to discontinue medication, observe hair regrowth, and subsequently observe the recurrence of hair loss upon reuse of medication. We first excluded organic conditions that can lead to hair loss and then discontinued the medication to observe whether hair loss was a consequence of methylphenidate.

In this case, there was no history of emotional stress before the occurrence of hair loss, and the patient was not diagnosed with anxiety or depressive disorders. Drug-induced alopecia is an uncommon adverse effect that has only been reported to occur with a limited number of psychotropic medications such as lithium, valproic acid, venlafaxine, fluoxetine, sertraline, atomoxetine, and methylphenidate.^[3] A few case reports have concluded that alopecia can be caused by stimulants.^[4,5] In this case, we want to emphasize that methylphenidate can cause hair loss and that this side effect should be noted in clinical practice.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

Öznur Bilaç, Meryem Özlem Kütük¹, Cemal Bilaç²

Department of Child and Adolescent Psychiatry, Manisa Mental Health Hospital, ²Department of Dermatology, Celal Bayar University Faculty of Medicine, Manisa,

¹Department of Child and Adolescent Psychiatry, Başkent University Faculty of Medicine, Adana, Turkey.

E-mail: oznurbilac@hotmail.com


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Letter to Editor

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