Valproate-induced hair loss: What to tell patients

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Teach patients that certain supplements and lifestyle changes may reduce this usually temporary side effect

s. B, age 29, has bipolar disorder that is stabilized by valproate, 1,250 mg/d. After 1 month of treatment, she shows scalp hair loss. She takes no other medications and is distressed because she had never experienced such copious hair loss. Ms. B's blood valproate level is at a therapeutic level. She wants to know if the hair loss will be permanent and what she can do to stop it.

Up to 28% of patients who take valproate suffer temporary alopecia.^{1,2} In most cases, hair loss is associated with long-term valproate pharmacotherapy. Hair loss appears to be dose-related² and may be more common in women than in men. Usually patients will report gradual but steady hair loss, commonly beginning 2 to 6 months after initiating treatment.3 Complete hair loss is rare and new hair growth typically begins approximately 2 to 3 months after alopecia onset.

Valproate can cause telogen effluvium, a non-scarring form of alopecia that occurs by precipitating the follicles into a premature rest phase. Other medications that may cause this type of hair loss include desipramine, imipramine, selective serotonin reuptake inhibitors, dopaminergics, anticoagulants, beta blockers, angiotensin-converting enzyme inhibitors, and cimetidine, as well as withdrawal from minoxidil, oral contraceptives, sulfasalazine, and antithyroid medicines.3

Advising patients

In addition to reducing a patient's valproate dosage when clinically feasible, you can suggest pharmacologic and lifestyle changes to help patients minimize hair loss:

1 Recommend a biotin supplement. Valproate can cause biotin deficiency and may lead to low serum and liver tissue biotinidase enzyme4; a major clinical manifestation of biotin deficiency is alopecia.

- 2 Tell patients to avoid taking valproate during meals to prevent its chelating effect on food. The chelating effect of valproate makes metals that facilitate hair growth, such as zinc and selenium, unavailable for absorption.5
- 3 Recommend zinc and selenium supplements, which can help stop further hair loss and regenerate hair.5
- 4 Suggest practical advice for hair care, including using soft brushes and mild shampoos and avoiding dyes, heated curlers, and hair dryers.
- 5 Consider minoxidil therapy. However, this is an expensive option and there are no cases documenting its use for alopecia caused by mood stabilizers.

References

- 1. Castro-Gago M, Gómez-Lado C, Eirís-Puñal J, et al. Serum biotinidase activity in children treated with valproic acid and carbamazepine. J Child Neurol. 2010;25(1):32-35.
- 2. Patrizi A, Savoia F, Negosanti F, et al. Telogen effluvium caused by magnesium valproate and lamotrigine. Acta Derm Venereol. 2005;85(1):77-78.
- 3. Mercke Y, Sheng H, Khan T, et al. Hair loss in psychopharmacology. Ann Clin Psychiatry. 2000;12(1):35-42.
- 4. Yilmaz Y, Tasdemir HA, Paksu MS. The influence of valproic acid treatment on hair and serum zinc levels and serum biotinidase activity. Eur J Paediatr Neurol. 2009;13(5):
- 5. Fatemi SH, Calabrese JR. Treatment of valproate-induced alopecia. Ann Pharmacother. 1995;29(12):1302.

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