

Hyperpigmentation and Hirsutism of Untreated Skin After Application of Bimatoprost Solution

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Bimatoprost solution is cosmetically used to treat eyelash hypotrichosis. It is believed to increase lash thickness and length, but the exact mechanism of action is unknown. We report a rare case of a 64-year-old woman who noted hyperpigmentation and hirsutism of the lower eyelids and bilateral temple areas following 8 weeks of application of bimatoprost solution. She was a dermatology nurse who strictly followed the application instructions. This unique presentation suggests that direct application of bimatoprost solution to only the upper eyelid may cause extraocular and periocular hyperpigmentation as well as localized hirsutism beyond the region of application. Side effects of bimatoprost solution require further research.

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Bimatoprost is a prostaglandin analogue that is used to treat eyelash hypotrichosis and intraocular pressure. In treating hypotrichosis, bimatoprost is applied along the base of the upper eyelashes. The mechanism of action is unknown, but it has been postulated that the prostaglandin receptors that are present in the hair bind to the prostaglandin analogue. Treatment with bimatoprost is believed to increase the percentage of hair follicles and duration of the anagen growth phase, which likely accounts for longer lashes. Bimatoprost also is thought to stimulate melanogenesis and growth of the dermal papilla and hair

bulb, resulting in darker and thicker lashes.¹ Current listed side effects most commonly include eye pruritus or conjunctival hyperemia, which occur in less than 4% of patients.² A less common side effect is hyperpigmentation of the eyelid skin, which is reversible several weeks to months following discontinuation of bimatoprost solution. It also is possible to have increased hair growth in areas exposed to bimatoprost solution outside of the treatment area of the upper eyelid margin. Another side effect, not reported in clinical studies, includes hyperpigmentation of the iris.³

We report a case of hyperpigmentation affecting the extraorbital and lower eyelid areas along with excess hair growth in untreated skin after 8 weeks of treatment with bimatoprost ophthalmic solution 0.03% (Latisse, Allergan, Inc). These side effects are of particular interest because the patient was a dermatology nurse who meticulously followed all application guidelines according to her clinical expertise.

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Figure 1. Hypertrichosis and hyperpigmentation of the right (A) and left (B) corner eyelid after 8 weeks of therapy with bimatoprost solution.

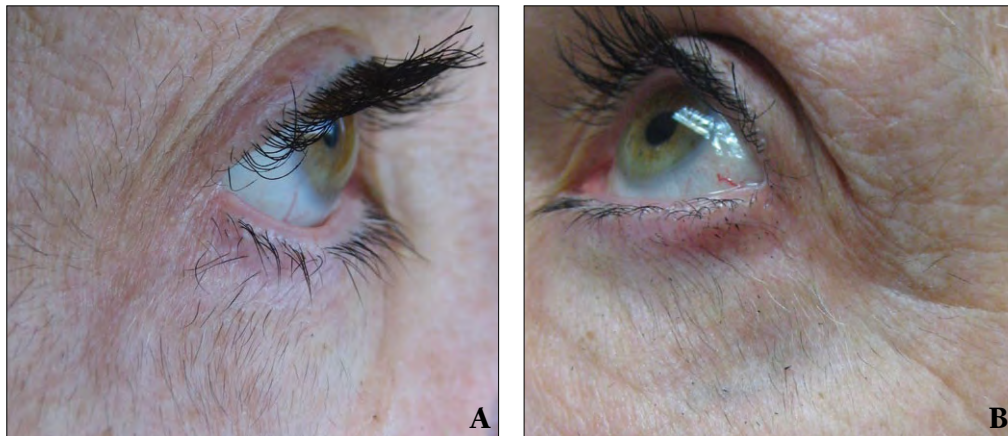
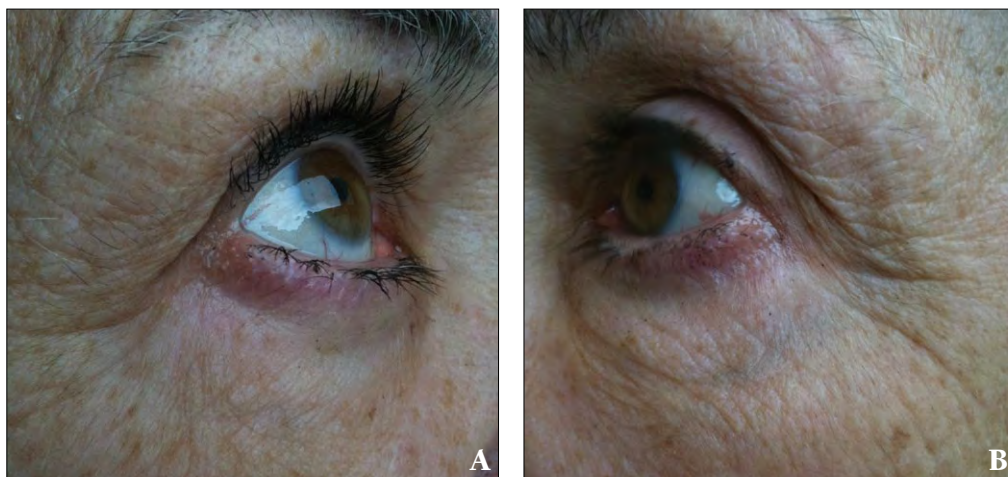


Figure 2. Resolution of hypertrichosis and hyperpigmentation of the right eye (A) and left eye (B) 8 weeks after discontinuation of therapy with bimatoprost solution.



CASE REPORT

A 64-year-old woman presented with hyperpigmentation and hirsutism of the lower eyelids and bilateral temple areas following 8 weeks of treatment with bimatoprost solution. The patient strictly followed the application instructions indicated by the product guidelines, which included using an applicator to administer 1 drop of bimatoprost solution along the base of the upper eyelashes, followed by blotting excess solution from unaffected areas around the eyelid. The patient was a dermatology nurse and had extensive experience counseling patients regarding proper medication usage, which discourages the notion that misapplication was the cause of the side effects she experienced. The patient used bimatoprost solution sparingly 4 to 5 times per week and was careful to ensure that no excess solution came in contact with unaffected skin. After 8 weeks of use, she noted new-onset hyperpigmentation and excess hair growth on the lower eyelids and temples (Figure 1). The patient's spouse commented that it appeared as if her mascara had

smear onto the skin below her eyes. She discontinued use of bimatoprost solution and saw no resolution after 4 weeks. After 8 weeks, the patient reported resolution of hyperpigmentation and excess hairs without intervention (Figure 2).

COMMENT

Our observations with this patient suggest that direct application of bimatoprost solution to only the upper eyelid may cause extraocular and periocular hyperpigmentation as well as localized hirsutism extending beyond the region of application. The onset, extent, and distribution of extraocular and periocular hypertrichosis deserves further research.

REFERENCES

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