Hypertrichosis in a Woman During Treatment with 3% Topical Minoxidil

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Hypertrichosis has been frequently observed during the oral administration of the potent antihypertensive agent, minoxidil. However, hypertrichosis is uncommon after treatment with topical minoxidil for alopecia, and usually occurs in areas close to the site of the application. We describe a 52-year-old woman with diffuse facial hypertrichosis. She developed abnormal hypertrichosis while applying the optimal dose of 3% topical minoxidil for 2 months for the treatment of androgenetic alopecia. (Ann Dermatol 12(1) 71~73, 2000).

Key Words: Hypertrichosis, 3% minoxidil.

Minoxidil (6-amino-1,2-dihydro-1-hydroxy-2-imino-4-piperidinopyrimidine) is a potent direct peripheral vasodilator that is used to control severe hypertension in patients who are resistant to conventional therapy. Patients receiving minoxidil systemically were found to have generalized, reversible hypertrichosis. However, hypertrichosis is uncommon after treatment with topical minoxidil for alopecia. In many previous cases, the hair growth was limited to the areas close to the site of application. Hypertrichosis is a more common side-effect of 5% topical minoxidil than 2% or 3%. We report a patient with diffuse facial hypertrichosis who had been applying 3% minoxidil solution on the scalp for 2 months.

CASE REPORT

A 52-year-old woman presented with diffuse hair loss on the vertex. A diagnosis of Ludwig 1 androgenetic alopecia was made. She had been treated with 3% topical minoxidil (Minoxyl®, Hyun Dai Pharmaceuticals Co., Seoul, Korea). Minoxidil was supplied in 30 ml bottle with a dropper marked at 1.0 ml. One milliliter of solution was applied to the balding area of the scalp with gentle fingertip massage. The patient was told to apply topical minoxidil at least 1 hour before sleeping and to wash her hands after application. The patient was instructed to avoid touching the treated area with her hands, or other objects to come into contact with the scalp. 2 months after starting the topical minoxidil application she noticed increased hair growth on her face.

Laboratory data including complete blood count, liver function test, thyroid hormones, follicle-stimulating hormone, luteinizing hormone, estradiol, testosterone, and DHEAS were all within normal limits.

On examination, abnormal hair growth was detected on the forehead, temples, cheeks, auricles, and the mustache area (Fig. 1). She was in good general health and was not taking any other drugs other than applying the topical minoxidil. Systemic conditions associated with hypertrichosis and hirsutism including polycystic ovarian syndrome and other hyperandrogenic states, were excluded. Her menopause began 2 years ago. Her blood pressure was normal. Minoxidil application was stopped and the abnormal hair growth gradually diminished and completely disappeared 3 months later (Fig. 2).
Fig. 1. Hypertrichosis of forehead (A), mustache area (B) and auricle (C).

Fig. 2. 3 months after discontinuing minoxidil application, the abnormal hair disappeared from forehead (A) and mustache area (B).
DISCUSSION

Topical minoxidil is generally well tolerated, and side effects consist mainly of dermatological reactions such as mild stinging, erythema, itching, scaling, flushing, and contact dermatitis, either allergic or irritant. Folliculitis and comedones have also been described. Increased hair growth outside the area of drug application has been reported. In these patients hypertrichosis on beard areas, ears, temples, malar prominences and arms has been described. This increased hair growth was unassociated with any significant minoxidil serum levels. A review of the major clinical trials on the use of topical minoxidil in androgenetic alopecia revealed that hypertrichosis has been reported in 0.8-9.9% of cases, depending on the study, and most cases of facial hair growth are explained by local transfer of minoxidil from the scalp to the face by fingertips or pillowcase. Hypertrichosis with 2 or 3% topical minoxidil was reported in men. Peluso et al. reported severe hypertrichosis of distant body area in women treated with 5% topical minoxidil on scalp. Generalized hypertrichosis was reported in a woman after applying 2% topical minoxidil in doses greater than that prescribed. In our case, diffuse facial hypertrichosis was developed in a woman who had been applying the optimal dose of 3% minoxidil on scalp. We couldn’t find a report that diffuse facial hypertrichosis developed in a woman treated with 3% topical minoxidil. It is unknown whether this abnormal hair growth in areas outside those treated with topical minoxidil is due to inadvertent exposure to topical minoxidil or a systemic effect of the drug. Gonzalez et al. suggested that the hypertrichosis was due to an increased total dose with consequent increased total absorption and that perhaps hypersensitivity of the hair follicles might have also played a role. Peluso et al. hypothesized that diffuse hypertrichosis induced by topical minoxidil might be due to both systemic absorption of the drug and hypersensitivity of the hair follicle.

In conclusion, our case shows that optimal dose of 3% topical minoxidil causes diffuse facial hypertrichosis in a woman with androgenetic alopecia.

REFERENCES