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Title page

Regrowth of hair in congenital triangular alopecia induced by sublingual minoxidil

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Congenital triangular alopecia (CTA), also known as temporal triangular alopecia, is a non-scarring alopecia presenting at birth or early in life. It is thought to be acquired rather than congenital. (1) It typically presents as a unilateral triangular alopecia patch in the frontotemporal area that remains unchanged. The pathogenesis is unknown but localized follicular miniaturization has been described. There is no gender predilection, and its incidence is around 0,11%. (1, 2)

A 54-year-old female presented with a 2 year history of diffuse loss of hair density (balding) over the frontal scalp in association with telogen effluvium (Sinclair stage 6 hair shedding). (3) Her past medical history included adult-onset acne treated with spironolactone 200mg/day for the last 5 years. On examination, in addition to Sinclair 2 female pattern hair loss (FPHL), (4) she was noted to have an incidental patch of triangular alopecia on her right temple of 4 x 3 cm. (Fig.1A) Trichoscopy showed hair single hair follicular units and hair fiber miniaturization on the mid-frontal scalp and within the triangular alopecia. No yellow dots or exclamation hairs were noted. On direct questioning, this triangular alopecia had been present since birth. The clinical diagnoses were FPHL and CTA. Alopecia areata (AA) was excluded based on clinical presentation and history. Treatment for FPHL was initiated via sublingual minoxidil 0,6mg/d. The patient declined hair restoration surgery for CTA. At 3 months, patient reported a reduction in hair shedding and improvement of overall hair density including regrowth in her temporal alopecia patch. (Fig.1B) On trichoscopy, terminal hairs were seen within the patch. The dose of sublingual minoxidil was further increased to 0,9mg/d, as a dose-dependent increase in terminal hair count and density has been reported in FPHL. (5) At 18 months, additional regrowth of terminal hair in the CTA patch was observed. (Fig.1C)

The diagnosis of CTA can be made based on trichoscopy which shows normal skin without signs of inflammation or atrophy, normal follicular openings and vellus hairs. Differential diagnosis includes AA, trichotillomania, traction alopecia, tinea capitis and aplasia cutis. These typically show other features including yellow dots, exclamation hairs, inflammation

and scaling, broken hairs, or atrophic skin. (6) Clinicians should recognize these clues on trichoscopy, as it is frequently mistreated as AA with intralesional steroid injections.

The most common treatment for CTA is a follicular unit extraction (FUE) hair transplant. Surgical excision of the patch has also been described with long lasting improvement. Less invasive treatments including topical and intralesional steroids have been tried without improvement. (2) Three case reports have been published suggesting rapid regrowth of terminal hair with the use of 3-5% topical minoxidil. These results were not maintained after discontinuation of topical minoxidil. (6) In our case, sublingual minoxidil was initiated to treat FPHL and rapid regrowth of terminal hair in the CTA patch was observed after 3 months. Sublingual minoxidil was preferred over oral as recent studies have shown increased follicular sulphate bioavailability and increased safety due to less hemodynamic changes. (5)

We report the first case of regrowth of terminal hair in CTA with the use of low dose sublingual minoxidil. This is a promising new treatment for CTA. More cases are needed to confirm its long-term efficacy.

Figures

Figure 1:

A. CTA patch prior minoxidil treatment
B. CTA patch after 3 months of minoxidil 0.6mg SL with some vellus and some terminal hairs
C. CTA patch after 18 months of minoxidil 0.9mg SL with complete regrowth of terminal hairs

CTA: Congenital triangular alopecia
SL: Sublingual

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Figure 1