Treating Testosterone Therapy Related Hair Loss in Trans People: A Clinical Trial of Sublingual Minoxidil

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Background:
Testosterone-based gender affirming hormone therapy (GAHT) can lead to androgenetic alopecia (AGA), or male-pattern hair loss—a common and often distressing change that can impact self-esteem and gender affirmation. Currently, there are no clinical trials to guide treatment of AGA in trans people, and most advice is based on anecdotal experience.

Methods:
In this double-blind, placebo-controlled trial, 32 trans participants with AGA were randomly assigned to receive either sublingual (under-the-tongue) minoxidil or placebo twice daily for 24 weeks. Hair counts were measured at the front and crown of the scalp, and quality of life was assessed using validated questionnaires.

Results:
Those who received sublingual minoxidil saw a 37% increase in hair count in the midfrontal region, and an 18% increase in thicker, cosmetically visible hairs in the crown. Microscopic imaging also showed more hairs in a growing phase. Participants rated their crown hair appearance more positively than those on placebo, although changes in quality of life scores were not statistically significant.

Conclusion:
For trans people experiencing AGA while on testosterone, sublingual minoxidil can safely and effectively stimulate hair regrowth—particularly in the crown and midfrontal scalp—and may improve satisfaction with hair appearance. This trial provides the first clinical evidence for a treatment option tailored to the needs of the trans community.