

A New Hair Restoration Technique Prevents Androgenic Hair Loss and Encourages Hair Growth in a Blinded Clinical Trial

Khosrow Tian*

Department of Plastic Surgery, SANA Clinic Düsseldorf Gerresheim, Gräulingerstraße Düsseldorf, Germany

Abstract

The hereditary disorder known as androgenic alopecia is brought on by the dermal papilla's gradual shrinkage. The hair follicle becomes increasingly malnourished throughout this process and finally perishes, resulting in gradual hair loss. Recently, we mentioned that modulation could stop hair loss. Here, using a monocentric blinded clinical experiment with participants and once-daily application of hair restoration technology to the scalp, we hope to show the beneficial effects of Tomorrowlabs HIF strengthening factor hair restoration technology on hair biology. Macro images of the head, Trichinosis evaluation of hair density, and the percentage of anagen hair were all used to evaluate the venerability and effectiveness of the testing, which also included dermatological evaluation, counting the amount of hair lost.

Keywords: Dermal papilla • Clinical trial • Androgenic alopecia

Introduction

The biggest and most adaptable human organ is the skin. It serves as a crucial component in the defence of the body's homeostasis by shielding it from both internal and external environmental stressors. The epidermis, the outermost layer of the skin, the dermis, the middle layer, and the sub cutis, the innermost layer of the three, make up the skin. The epidermis, on the other hand, is composed of keratinocytes and has five layers. From the outside in, the overlaid layers are as follows: stratum corneum, lucid, granulosum, spinosum, and Basale. Skin and hair were once seen as coverings and ornaments; today, it is understood that they are useful parts. Hair serves important roles including thermoregulation, skin protection, sebum production, apocrine sweat and pheromone release, as well as social contact, in addition to supporting skin homeostasis, regeneration, and repair. The hair follicle at the root of the hair is mostly made up of epithelial and dermal papilla cells. Even the dermal papilla niche, which alternates between stages of vigorous development regression and relative "quiescence," is vital to the hair growth process and regeneration cycle. Male- and female-pattern hair loss, also known as androgenic alopecia, is a genetically predisposed clinical disease that affects the majority of men and almost half of women.

Arises as a result of the dermal papillae, a spherical structure that feeds and oxygenates the HF, becoming weaker. The anagen phase, which is when hair grows and is produced, gradually shortens and the telegenic phase, which is when hair falls out, elongates despite the fact that the etiopathogenesis of the condition is not yet fully known. Additionally, the hair follicle goes through a specific "miniaturisation" process during hair loss, making the hair weaker and thinner. Hair loss results from the shrinkage of the hair shaft, which is linked to shrinkage of the dermal papilla. The diameter of the hair shaft is inversely correlated with the size of the DP. If left untreated, the HF gradually loses nutrients, which starts the shrinking process.

***Address for Correspondence:** Khosrow Tian, Department of Plastic Surgery, SANA Clinic Düsseldorf Gerresheim, Gräulingerstraße Düsseldorf, Germany, E-mail: khosrowtian65@gmail.com

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Literature Review

A crucial signalling mechanism that controls hair growth, repair, and regeneration exists. Our team has recently reaffirmed the pathway's significance as a model of molecular signalling controlling both skin and hair regeneration and, in particular, altering the size and form of the dermal papilla. Particularly, hair development resembles wound healing in that it necessitates a highly coordinated interaction between the production of new tissue and cell growth and migration. Neovascularization, collagen, and elastin synthesis are stimulated by the hypoxia-inducible factor when wounds heal. has been connected to the hair bulb's deficiency in blood vessels and nutrition delivery. Because they respond to hypoxia, HIF activation can thus influence both neovascularization and regeneration.

The one now dominating the market is monoxide. It is now available as a topical 2% and 5% tonic or foam that has to be used twice a day to treat hypertension. Previously, it was taken orally as a therapy for hypertension with the side effect of hypertrichosis. The widespread agreement attributes its vasodilating qualities as the reason for its impact on hair growth, despite the fact that the mechanism has not yet been determined.

Discussion

The HIF pathway is specifically linked to the molecular mechanism of action of monoxide. It is well known that HIF-1 is rapidly degraded as a result of prolyl hydroxylase-mediated hydroxylation. Preventing the transcription of genes involved in hypoxia response. Such as and Endothelin's. In turn, monoxide increases HIF and every antigenic component of it. Increased vascularization characterises the antigen phase of the hair cycle; hence, neovascularization brought on by monoxide causes dormant hair follicles to re-enter the antigen phase. Ascorbate, a co-factor of, can reverse the effects of monoxide, indicating that it is a competitive inhibitor at the binding site for ascorbate. It is hardly unexpected, given these mechanistic insights, that the recently launched chemical Stemoxydine.

In this study, sweetened beverages were the top two sources of added sugars. The same primary sources were found in a previous report from ; Men consumed a total of added sugars among adults who exceeded the recommendation for limiting added sugars f those added sugars were consumed from sweetened beverages and tea, respectively; Women, on the other hand, consumed approximately and of added sugars from sweetened beverages and tea, respectively, for a total of 88 g of added sugars Identifying which foods or beverages to target in intervention efforts may be made easier by investigating the top sources of added sugars, particularly among

consumers. In many workplaces and communities, population-based nutrition standards can be layered on top of a tailored approach the amount of added sugars in packaged tea products and sweet bakery products could be reduced through product reformulation. In addition, among high-consumers, educating them to consider consuming fewer foods and beverages with added sugars may help reduce the total amount of added sugars consumed Also a PHD competitive The mechanism of action behind the stated hydro-alcoholic lotion impact on improving hair biology is inducing hypoxia-like signals via HIF-pathway regulation [1-5].

Conclusion

Since iron is a necessary co-factor for PHD and is chelated by HIF strengthening factor, there is no more iron available to activate PHD. Once more, the inactivation of PHD results in significant amounts of underrated The HRE's transcription has potent pro-antigenic and pro-regenerative effects. The little active component can enter the skin when applied topically. The use of antigenic pharmacological drugs is a plausible route to preventing hair loss because the reduction in blood flow to the is a prominent aspect of hair loss. We have previously shown that the HIF strengthening factor hair restoration technique has a good impact on in vitro hair biology the hanging-drop approach was used to provide standard AGA-fighting agents such monoxide.

Over the course of nine months, the product evaluated in this application study was employed on the target application area. Before the study began, a risk analysis of the test product's components was completed. To identify potential hazards and threats, all available material was thoroughly reviewed. The primary objective of this work was to evaluate the tolerance and efficacy of the [HSF] hair restoration product in accordance with dermatological test standards. The individuals' integument was initially inspected for health and integrity. The person was disqualified if they had a medical problem that needed to be treated. Additionally, a useful discussion of the study's design, its circumstances, and the rights and responsibilities.

Acknowledgement

None.

Conflict of Interest

There are no conflicts of interest by author.

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