

Androgenetic alopecia (AGA) - New Approach

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Abstract

Androgenetic alopecia is a non-scarring progressive miniaturization of the hair follicle with a usual characteristic pattern distribution in genetically predisposed men¹. It is the most common hair loss disorder which causes significant impairment of life^{2,3}. The frequency and severity of male AGA increases with age in all ethnic groups⁴.

Key words: : alopecia, clinical diagnosis, male androgenic disease updated management.

Introduction

Androgenetic alopecia is an androgen-dependent trait, which leads to progressive miniaturization of the hair follicle in predisposed men. Enhanced androgen effects at the genetically predisposed hair follicles are mediated by raised androgen receptor density and increased activity of 5- α -reductase type II. Thus, AGA is a consequence of the anabolic effect of androgens, such as hormonal changes leading to structural changes in skin and scalp which in turn cause hair loss. However, AGA also requires the presence of the male hormone testosterone. Genetics cause hair follicles to become sensitive to dihydrotestosterone (DHT), a byproduct of testosterone. The follicles begin to grow smaller, have a shorter life span and eventually fall out altogether or leave behind fuzz. Possibly environmental-epigenetic factors apparently play a role in AGA.

Clinical picture

In AGA, hair loss is a well defined pattern, beginning above both temples, and hair thins at the crown of the head. Often a rim of hair is around the sides and rear of head in the left. This pattern is dubbed "Hippocratic balding" and may rarely progress to complete baldness. In males, AGA typically presents with a male pattern distribution including bi-temporal recession and vertex thinning, sometimes anterior recession. About 10 % of men with AGA present a female pattern. It is important to determine if there are other concomitant hair disorders.

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A detailed history should be taken on systemic and newly diagnosed diseases prior to first sign of hair loss. Allergies are not important for the diagnosis of AGA, but they should be recorded for possible significance with regard to therapy. Drug history should be taken, moreover, lifestyle procedures such as special hairstyles should be considered in the history. Researchers reported a dose-dependent of moderate to severe AGA in male patients and ultraviolet radiation exposure as an aggravating factor of AGA.

Management

General Considerations

Patients should avoid hair care products likely to damage the scalp or hair and should maintain adequate diet, with adequate protein. If possible, any drug that could affect negatively affect hair growth should be stopped and alternative substitute should be made. Medications for which hair loss is a common potential side effect include retinoids, cytotoxic agents, anticoagulants, captopril, cholesterol lowering drugs, lithium, and valproate. Any underlying scalp disorder should be treated.

Medical Treatments

Patients should be counseled that AGA treatments will not restore hair growth to its pre-pubertal density and that the main aim is to prevent further progression of hair loss. Currently, there are two agents, topical minoxidil and oral finasteride, approved by the US food and drug administration for the treatment of AGA.

Topical Minoxidil Solution

It is administered at a dosage of 1ml twice daily. The main benefit appears to be the prolongation of the anagen phase and hair shaft diameter, irrespective of the underlying cause. It is well established that 5 % of Minoxidil is more effective than the 2 % solution.

Patients should be warned that in the initial 2-8 weeks a temporary telogen effluvium may occur in some, which is self limiting and subsides when subsequent anagen regrowth begins, and it should not be a cause for treatment cessation.

Oral Finasteride

It is a potent type II 5 α -reductase inhibitor that should be administered at a daily dosage of 1 mg. The number of responding hairs established after 1 year and continued treatment increase the length, diameter and pigmentation of hair so that the coverage of the scalp increased over time. On stopping finasteride, the regrowth hair persisted, but the balding process resumed. Finasteride is generally well tolerated, side effects are typically mild, and generally do not require discontinuation of therapy. Rare side effect may include some loss of libido and erectile function. A recent Japanese study of 3117 patients of AGA shows that long term use of oral finasteride maintained progressive hair growth without recognized side effects. Another study revealed finasteride 1 mg/day was well tolerated and led to durable improvements in scalp hair growth. In those individuals with no perceptible improvement or stabilization after 1 year of treatment, a combination of medical treatment with hair transplantation is recommended.

Surgical Management

Despite advance in medical therapy, hair transplantation remains the only means of permanent hair restoration in severe AGA. It is contraindicated in patients with hypertension, cardiac diseases and diabetes mellitus.

“Cold X5 Hair Laser In The Treatment Of Male Androgenic Alopecia And Hair Growth”

Both finasteride and minoxidil are effective treatment methods of AGA, but patients who exhibit a poor response to these methods have no additional adequate treatment modalities. In a study researcher reported that after 24 weeks of treatment a low level light therapy named x5 hair laser group showed significantly greater hair density.

Conclusion

Although being an autoimmune disorder, Alopecia Areata is not life threatening and doesn't cause physical suffering.

But people who are afflicted with this hair loss condition do suffer socially and emotionally, most especially if the hair loss disorder involves their whole body. Alopecia Areata has no known cure or treatment and there are no FDA approved medications or drugs either. Although, there are several treatments or cures that involve the use of some drugs that proved to be beneficial and helpful in treating hair growth, but for the cure itself in treating Alopecia Areata or preventing new incidents of hair loss is still non-existent.

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