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Original Article

Male androgenetic alopecia treated with finasteride

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Abstract ***Background*** Dihydrotestosterone causes micronization of scalp hair follicles, resulting in androgenetic alopecia. Finasteride inhibits type II 5α-reductase, thereby, decreasing the conversion of testosterone to dihydrotestosterone.

Objective To determine the efficacy of finasteride in male androgenetic alopecia.

Patients and methods 16 men from 18-42yrs of age with moderate vertex pattern hair loss received 1mg finasteride daily for 2 yrs. Efficacy was determined by patients self assessments, investigator assessment and assessment of clinical photographs. safety was assessed by clinical analysis of adverse experience if any

Results After 6 months-1yr treatment, there was a significant improvement in patient, investigator and photographic assessment. Efficacy was improved and maintained throughout the second year of the study. Finasteride was generally well tolerated.

Conclusion In men with male pattern hair loss finasteride 1mg for 2 yrs slowed the progression of hair fall and increased hair growth.

Key words
Androgenetic alopecia, finasteride

Introduction

Androgenetic alopecia is hereditary thinning of the hair induced by androgens in genetically susceptible men and women. This condition is also known as male pattern hair loss or common baldness in men and as female pattern hair loss in women. Thinning usually begins between the age of 12 and 40 years in both sexes, and at least 50% of the men by the age of 50 and 50% of women by 60 years are more affected. It is more common in men.[1] The pattern of inheritance is polygeneic.[2]

Male pattern hair loss results from a combination of hereditary and acquired factors[3] and hormones. Hamilton[4] described the interdependence of androgens, genetic factors and age which influences scalp hair growth.

Androgens are important in regulating hair growth at puberty they increase the size of follicles in beard, chest and limbs and decrease the size of follicle in bitemporal regions which reshapes the hair line in men and women. In susceptible hair follicle of

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the scalp dihydrotestosterone binds to androgen receptor and this hormone receptor complex then activates the genes responsible for gradual transformation of large terminal follicle to miniaturized follicle.[5,6]

Oral finasteride, a type II 5α-reductase inhibitor lower serum, prostrate, and scalp dihydrotestosterone. Early studies show that 1mg/day is effective in male pattern hair loss.[6]

Patients and methods

Sixteen men 18-42 yrs of age with moderate vertex pattern male hair loss according to a modified Norwood/Hamilton classification scale (grade3-7),[7,8] were selected for this observational. The exclusion criteria were use of any other therapeutic modality in the last one year, use of finasteride for any other medical cause, any surgical correction of scalp hair, no alteration in hair style or use of hair dye.

Evaluation procedure

The patients were evaluated on

1. Patient self assessment
2. Investigator assessment.
3. Assessment of clinical photographs

Patient self assessment: Every six months patients assessed their scalp hair growth using a validated questionnaire consisting of five questions in patients' language on treatment efficacy and satisfaction (**Table 1**).

Table 1 Patients' self-assessment questionnaire

Question	*Score*
1. My bald area is getting smaller	
Strongly agree	1
Agree	2
No opinion	3
Disagree	4
Strongly disagree	5
2. Appearance of my hair is after treatment	
Better	1
Little better	2
Same	3
Little worse	4
Worse	5
3. New hair growth	
Greatly increased	1
Moderately increased	2
Slight increased	3
No change	4
Slightly decreased	5
Moderately decreased	6
Greatly decreased	7
4. Slowing down your hair loss	
Effective	1
Some what effective	2
Not very effective	3
Not effective all	4
5. Satisfaction with the appearance of hair	
A. Frontal area	
B. Vertex (Top of your hair)	
Very Satisfied	1
Satisfied	2
Neutral	3
Dissatisfied	4
Very dissatisfied	5

Investigator assessment Investigator assessed patient on a 7 point scale of hair growth every six months comparing with baseline as follows: -3=greatly decreased, -2=moderately decreased, -1=slightly decreased, 0=no change, +1=slightly increased, +2=moderately increased, +3=greatly increased.

Global photographic assessment Standard color global photographs (Kodak KR 64-35mm slide film) of the vertex scalp were taken. The framing exposures were held constant. The baseline and post-treatment photographs were independently assessed with a 7-point rating scale by two

Table 2 Patient self assessment's (n=16)

No. of patients.	*Score*
3	6
2	7
1	8
1	10
3	11
1	12
4	14
1	16

Minimum score 5 – maximum= 26)

Table 3 Investigator assessment on 7-point scale (n=16)

No. of patients	*Score*
2	+1
11	+2
3	+3

+3, +2 signify the great to moderate increased in hair growth further strengthened by photographic assessment.

dermatologists and a physician.

Safety assessment included any clinical adverse effect noted by the patient.

Results

A total of sixteen men aged 18-42 yrs were enrolled in the study. All completed the 2 years study period. The results of evaluation procedures are listed in **Table 2** and **3**.

Discussion

This clinical trial was designed to evaluate the efficacy of finasteride 1mg daily on long term basis. The drug has already an established role in treatment of androgenetic alopecia in other races and in the developed countries of the world.[1,6,9,10] Since local literature lacks such evidence-based studies, it was planned and continued for two years. Present study under discussion verified results of those already in the literature.[6,7,10] We can safely conclude that this data provide direct evidence that finasteride treatment results in favorable results on hair growth and contribute to the visible improvements in hair growth observed in the treated patients.

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