

LETTER TO THE EDITOR

Efficacy of Finasteride 1.25 mg on Female Pattern Hair Loss; Pilot Study

Won-Jeong Kim, M.D.¹, Margaret Song, M.D.¹, Hyun-Chang Ko, M.D.¹,
Byung-Soo Kim, M.D., Ph.D.^{1,2}, Moon-Bum Kim, M.D., Ph.D.^{1,2}

¹Department of Dermatology, Pusan National University School of Medicine, ²Biomedical Research Institute, Pusan National University Hospital, Busan, Korea

Dear Editor:

Although finasteride was approved only for male pattern baldness¹, it has been in off-label use on female pattern hair loss (FPHL). A pilot study done on postmenopausal women showed that 1mg of finasteride had no effect on FPHL². Following that report, 2.5 mg or 5 mg of finasteride in FPHL was shown to be effective in several case reports and a few studies^{3,4}. This suggests that finasteride may be effective in FPHL, but its optimal dosage on FPHL needs to be clarified. Researchers have not described any dose-dependent side effect (1 mg; 11.9% vs. 5 mg; 4.6%)^{2,4}, in women, administering the medication beyond what is efficacious is unreasonable. To determine whether 1.25 mg finasteride can be the minimal effective dosage on FPHL, we conducted a 28 week, open-labeled, prospective study for 18 normoandrogenic FPHL patients with finasteride 1.25 mg daily. All the patients had normal androgen, iron, ferritin level and normal thyroid function test at initial screening. The treatment efficacy was evaluated with the changes of hair density and thickness⁴ assessed by phototrichogram (Aramo-SG, Aram HUVIS Co., Seoul, Korea) and patients' and physician's global assessment a using 7-point scale score⁵. All premeno-

pausal women (n=9) were informed of the potential risk of the finasteride on a male fetus. Fourteen patients completed the study, and their demographics and results were noted in Table 1. Three patients withdrew after treatment of 2~4 months because of no remarkable clinical improvement and another patient has been lost to follow-up. Baseline mean hair density was $101.7 \pm 27.14/\text{cm}^2$ and hair thickness was $53.4 \pm 10.3 \mu\text{m}$. After 28 weeks of treatment, phototrichogram assessment demonstrated 5.87% mean increment (from 101.7 ± 27.14 to $107.8 \pm 18.34/\text{cm}^2$, $p=0.29$) of hair density and 11.8% mean increment (from 53.4 ± 10.3 to $60.1 \pm 10.4 \mu\text{m}$, $p=0.06$) of hair thickness without statistical significance (paired t-test, SPSS 13.0; SPSS Inc., Chicago, IL, USA) (Fig. 1). Ten (71.4%) of the 14 patients rated their states as 'no change' and the physicians also recorded 'no change' in 9 (64.3%) patients, at the end of the study.

Though the clinical pattern of hair loss is different from men and women and the role of androgen in the pathogenesis of FPHL is unclear until now, it is believed that the pathogenesis of FPHL is similar with an inherited tendency of hair follicles to miniaturize progressively when exposed to dihydrotestosterone^{6,7}. Price et al.² reported that finasteride at 1 mg/day in a patient with FPHL failed to show slowing hair thinning, increasing growth, or improved appearance. Iorizzo et al.³ showed some improvement in 62% of patients with finasteride 2.5 mg daily and Yeon et al.⁴ also reported daily finasteride 5 mg was effective in FPHL, but Carmina and Lobo.⁸ reported the opposite result with the same dosage (5 mg/day). A previous report of finasteride 1.25 mg daily was limited to just four hyperandrogenic FPHL people⁹. This is the first study of daily finasteride 1.25 mg in normoandrogenic FPHL patients. In addition, most previous studies evaluate the efficacy through photographic

Received May 2, 2011, Revised September 20, 2011, Accepted for publication September 20, 2011

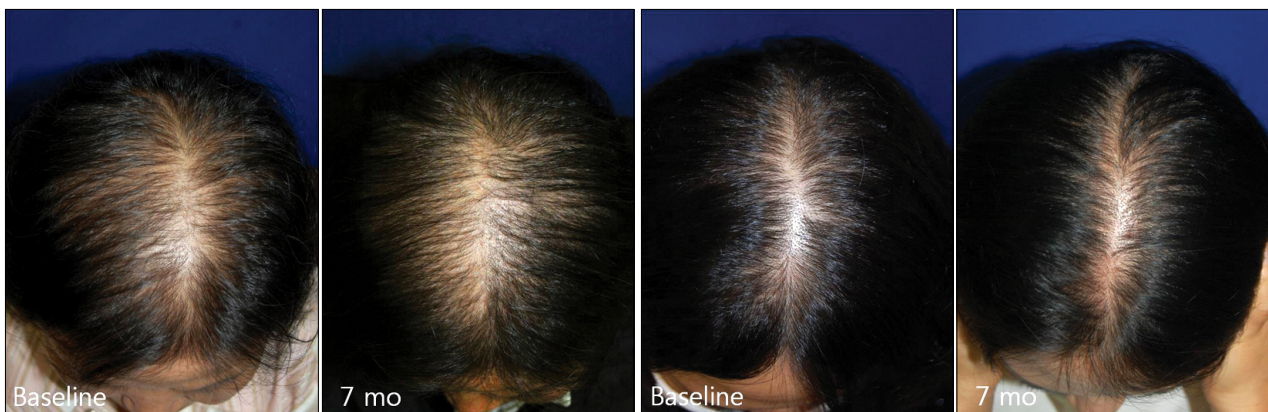
Corresponding author: Moon-Bum Kim, M.D., Ph.D., Department of Dermatology, Pusan National University Hospital, Pusan National University School of Medicine, 179 Gudeok-ro, Seo-gu, Busan 602-739, Korea. Tel: 82-51-240-7338, Fax: 82-51-245-9467, E-mail: drkmp@hanmail.net

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Table 1. Baseline characteristics, folliscope assessment of hair density/thickness, and global assessment of enrolled patients before and 28 weeks after finasteride 1.25 mg/day treatment

	n	Baseline	28 weeks	Mean change from baseline (%)	p-value
Age (yr)	18	46.3±12.8			
Duration (yr)	18	4.13±3.39			
Hair density (×60, /cm ²)	14	101.7±27.14	107.8±18.34	5.87	0.29
Hair thickness (μm)	14	53.4±10.3	60.1±10.4	11.81	0.06
Patients' GA (7-point scale*)	14				
Decreased (-3, -2, -1)			2		
No change (0)			10		
Increased (+1, +2, +3)			2		
Physician's GA (7-point scale)	14				
Decreased (-3, -2, -1)			3		
No change (0)			9		
Increased (+1, +2, +3)			2		

Values are presented as number or mean±standard deviation. Patients' GA: patients' global assessment score evaluated by 7-point scale, Physician's GA: physician's global assessment score evaluated by 7-point scale. *Defined from the score -3 to +3. -3: greatly decreased, -2, moderately decreased, -1, slight decreased, 0: no change, +1: slightly increased, +2: moderately increased, +3: greatly increased.

**Fig. 1.** The patients with improved physician's global assessment score (+1) after 7 months of daily finasteride 1.25 mg medication.

assessment by patients and investigators^{8,9}, but we used phototrichogram for objective evaluation of efficacy. In this study, patients with FPHL did not show a significant increase in hair growth, but hair density and thickness was minimally increased or constant without further hair loss even though the sample size was small and the duration of treatment was short. Most women with FPHL tend to experience more negative body-image, more social anxiety, and poor self-esteem than control subjects¹⁰. Therefore, we thought that subjects reporting 'no change' or 'slight increased' about their condition is meaningful in the treatment of FPHL. Previous studies reported drug-related adverse effect such as headache, depression, nausea, hot flushing, menstrual irregularity, or increased body hair in some patients^{2,4,6}. However, no one reported

drug-related symptoms during this study.

From this study, we found out that daily finasteride 1.25 mg medication for 28 weeks in FPHL patients show some measurable efficacy but it doesn't show objective clinical efficacy. Therefore, we suggest that a dose higher than 1.25 mg/day, more number of patients and longer duration of treatment are needed to confirm the effects of this clinical trial in normoandrogenic FPHL.

ACKNOWLEDGMENT

This study was supported by a grant of the Korean Health Technology R&D Project, Ministry of Health and Welfare, Republic of Korea (A070001).

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