Sir,

Recently, Yeon's group and our own group demonstrated that the dose of 5 mg/day is effective in both pre- and post-menopausal women. However, there are few prospective studies to determine finasteride's adverse effects in women. Some refer to treatment of hirsutism, others to acne, and few to female pattern hair loss (FPHL). In all of them, the adverse effects reported are rare, mild, and usually transient. The most commonly referred in literature are headache, menstrual irregularities, dizziness, and increased body hair growth.

Decreased libido was reported in 10%–20% of women with hirsutism medicated with finasteride 5 mg daily for 12 months. Headache was reported in 10%–25%. Gastrointestinal discomfort was found in 4 of 35 women. In women with hair loss, Kohler reported 2 out of 12 women receiving finasteride 5 mg/day complained of decreased libido, dry skin, and mild acne. We reported decreased libido in 4 of 40 postmenopausal women taking 5 mg of finasteride daily. Breast swelling and tenderness, headache, irregular menstruation, dizziness, and increased body hair have also been reported.

Carmina, Wong, Lakryc, and Shum reported the absence of important adverse effects in patients with finasteride 5 mg orally daily. A review of 20 peer-reviewed articles found that very few side effects, or adverse events, related to sexual dysfunction have been reported in studies in which dutasteride or finasteride has been used to treat hair loss in women.

It should be emphasized that finasteride is not approved for use in women and is forbidden in pregnant women (is classified by the U. S. Food and Drug Administration as pregnancy risk Category X). Abnormalities of external male genitalia, namely, feminization of male fetus were reported in animal studies.

The aim of this study was to determine the short- and middle-term side effects of 5 mg/day finasteride in premenopausal women with FPHL.

---

**METHODS**

**Inclusion criteria**

Premenopausal women (18 years old or more) observed in our hair clinic between October 1, 2007 and August 31, 2011 with the diagnosis of FPHL and without treatment for the previous 6 months or having stopped treatment for 6 months. Informed consent for being treated with 5 mg/day oral finasteride. Exclusion criteria: younger than 18 years old; postmenopausal; have not signed the informed consent form; clinical or laboratory signs of hyperandrogenism; intention of being pregnant for the following 5 years; and personal or family history of breast cancer. Hepatic, cardiac, respiratory, or renal insufficiency not be willing to fulfill the plan of visits and blood collection required.

Contraception was guaranteed by mechanical barrier or drospirenone 3 mg plus ethinyl estradiol 0.03 mg tablet intake or by mechanical methods. Adverse effects were obtained by patient enquire and blood tests at months 3, 6, 12, 18, 24, and 36. A pretreatment blood test was obtained at day 0. For both finasteride (5 mg) and drospirenone (3 mg) plus ethinyl estradiol (0.03 mg), a prescription was given to the patient (not the drug itself).

Safety evaluation at 0, 3, 6, 12e18 months: asking for symptoms and blood test-blood count, aspartate aminotransferase, alanine aminotransferase, total bilirubin, alkaline phosphatase, glycemia, urea, creatinine, total testosterone, free testosterone, dehydroepiandrosterone sulfate, delta-4 androstenedione, 5α-dihydrotestosterone, 17-beta-hydroxyprogesterone, cortisol, prolactin, luteinizing hormone, follicle-stimulating hormone.

**RESULTS**

From 336 patients with FPHL asked to be enrolled in the study, only 256 patients were included. After 3 months of treatment, when asked specifically for adverse effects, of the 51 patients:

One in 5 patients had one or more adverse effect at the first observation. Most of them decreased in intensity or...
In conclusion, finasteride is useful in premenopausal FPHL patients that do not intend to be pregnant, especially to nonresponders or low responders to topical minoxidil (the approved treatment for FPHL). Adverse effects are frequent, mild, and tend to disappear over time, allowing the long-term treatment of the condition.

**Financial support and sponsorship**

Nil.

**Conflicts of interest**

There are no conflicts of interest.

**Rui Oliveira-Soares, Marisa C André, Miguel Peres-Correia**

Department of Dermatology, Hospital Cuf Descobertas and Hospital Cuf Torres Vedras, Portugal

**Address for correspondence:**
Dr. Rui Oliveira-Soares, Centro De Dermatologia, Hospital CUF Descobertas, CUF Torres Vedras Hospital, Torres Vedras, Portugal.

E-mail: reos8@hotmail.com

**REFERENCES**

1. Kaufman KD, Olsen EA, Whiting D, Savin R, Devillez R, Bergfeld W, et al. Finasteride in the treatment of men with androgenetic alopecia. Finasteride Male Pattern Hair Loss Study Group. J Am Acad Dermatol 1998;39:578-89.
2. Drake L, Hordinsky M, Fiedler V, Swinehart J, Unger WP, Cotterill PC, et al. The effects of finasteride on scalp skin and serum androgen levels in men with androgenetic alopecia. J Am Acad Dermatol 1999;41:550-4.
3. Price VH, Roberts JL, Hordinsky M, Olsen EA, Savin R, Bergfeld W, et al. Lack of efficacy of finasteride in postmenopausal women with androgenetic alopecia. J Am Acad Dermatol 2000;43:768-76.
4. Trüeb RM, Swiss Trichology Study Group. Finasteride treatment of patterned hair loss in normoandrogenic postmenopausal women. Dermatology 2004;209:202-7.
5. Valsecchi R, Leghissa P, Riva M. Female androgenetic alopecia treated by finasteride: A case forward. Acta Derm Venereol 2004;84:488-9.
6. Camacho F. Hirsutismo: Enfoque clinico terapeutico. Acta Derm Venereol 2001:24:190-206.
7. Shum KW, Cullen DR, Messenger AG. Hair loss in women with hyperandrogenism: Four cases responding to finasteride. J Am Acad Dermatol 2002;47:733-9.
8. Thai KE, Sinclair RD. Finasteride for female androgenetic alopecia. Br J Dermatol 2002;147:812-3.
9. Yeon JH, Jung JY, Choi JW, Kim BJ, Youn SW, Park KC, et al. 5 mg/day finasteride treatment for normoandrogenic Asian women with female pattern hair loss. J Eur Acad Dermatol Venereol 2011;25:211-4.
10. Oliveira-Soares R, Silva JM, Correia MP, André MC. Finasteride 5 mg/day treatment of patterned hair loss in normo-androgenic postmenopausal women. Int J Trichology 2013;5:22-5.
11. Townsend KA, Marlowe KE. Relative safety and efficacy of finasteride for treatment of hirsutism. Ann Pharmacother 2004;38:1070-3.
12. Kohler C, Tschumi K, Bodmer C, Schneider M, Birkhaeuser M. Effect of finasteride 5 mg (Proscar) on acne and alopecia in female patients.
with normal serum levels of free testosterone. Gynecol Endocrinol 2007;23:142-5.

13. Moghetti P, Castello R, Magnani CM, Tosi F, Negri C, Armanini D, et al. Clinical and hormonal effects of the 5 alpha-reductase inhibitor finasteride in idiopathic hirsutism. J Clin Endocrinol Metab 1994;79:1115-21.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.