Safety of oral bicalutamide in female pattern hair loss: A retrospective review of 316 patients

To the Editor: The pathogenesis of female pattern hair loss (FPHL) involves androgen-mediated hair follicle miniaturization and perturbation of the hair cycle in genetically susceptible follicles.[1,2] Spironolactone, cyproterone acetate, and flutamide have been shown to be efficacious in the treatment of FPHL.[1,2] Use of flutamide requires caution due to the risk of significant liver toxicity, particularly at high doses.[2]

Bicalutamide is a nonsteroidal, pure antiandrogen.[3] It has no estrogenic, progestational, glucocorticoid, mineralocorticoid, or androgenic activity and does not inhibit steroid 5 α-reductase.[3] Flutamide produces dose-related marked increases in serum luteinizing hormone (LH) and testosterone as a consequence of the central inhibition of the negative feedback effects of androgens on the hypothalamic-pituitary-testes axis.[3] Bicalutamide, in contrast, does not cross the blood-brain barrier and thus has little effect on serum LH and testosterone; that is, it is peripherally selective.[3] Bicalutamide has a more favorable safety profile than flutamide when used in the treatment of prostate cancer.[4]

To evaluate the safety of bicalutamide in FPHL, we conducted a retrospective review of all patients prescribed oral bicalutamide at a specialist hair clinic between April 2013 and October 2019. We identified 316 women through a computer database search. Patient demographics and doses prescribed are presented in Table I. The standard dose was 10 mg daily, which is substantially lower than the typical dose used to treat prostate cancer (150 mg daily).[4]

The mean duration of treatment was 6.21 months (range, 2-69 months). Bicalutamide was prescribed together with oral minoxidil in 308 patients and spironolactone in 172 patients. Six patients received bicalutamide monotherapy. Baseline blood tests (full blood count, liver, and renal function) and 3-month monitoring blood tests were performed.

The most common adverse effect was mild elevation of liver transaminases in 9 patients (2.85%). This was less than twice the upper limit of normal and asymptomatic in all patients, and resolved without a dose change in 4 of 9 patients. The transaminitis in 2 patients resolved with dose reduction. Three patients with transaminitis discontinued bicalutamide. Other adverse effects are summarized in Table II. Two patients who had discontinued flutamide due to the development of colitis were able to tolerate bicalutamide without relapse.

Table I. Patient demographics and doses of bicalutamide

Variable	Patients, No.	Result
Age, mean (range), y	316	48.96(15-85)
Starting dose	1	10 mg weekly
	1	5 mg daily
	295	10 mg daily
	10	12.5 mg daily
	7	20 mg daily
	1	25 mg daily
	1	50 mg daily
Highest dose	220	10 mg daily
	8	12.5 mg daily
	79	20 mg daily
	3	25 mg daily
	5	30 mg daily
	1	50 mg daily

Table II. Adverse effects and other reasons for discontinuation of bicalutamide

Adverse effects	Patients, No. (%)	Discontinuation, No.
Mildly elevated transaminases (<2× upper limit of normal)	9 (2.85)	3
Peripheral edema	8 (2.53)	0
Gastrointestinal complaints	6 (1.90)	4
Breast tenderness	3 (0.95)	0
Acneiform eruption	2 (0.63)	0
Dizziness	2 (0.63)	1
Myalgias	2 (0.63)	1
Reduced libido	1 (0.32)	0
Low mood	1 (0.32)	1
Menstrual irregularity	1 (0.32)	1
Palpitations and dyspnea	1 (0.32)	1
Photosensitivity	1 (0.32)	1
Other reasons for discontinuation of bicalutamide		
Patient preference		14
Perceived lack of efficacy		21
Patient did not start medication		14

Efficacy was evaluated as a secondary objective in the 138 patients who had taken bicalutamide for ≥6 months. In this cohort, concomitant minoxidil was used in 135 patients and spironolactone in 100 patients. Three patients received bicalutamide monotherapy. Clinical photographs taken at 3-month intervals were reviewed by 2 dermatologists to assess the Sinclair stage,[5] a 5-point scale for grading the severity of FPHL. The mean Sinclair

stage at baseline was 2.77. The mean reduction in Sinclair stage was 0.18 (6.5%) at 3 months, 0.47 (17.0%) at 6 months, 0.56 (20.2%) at 9 months, 0.68 (24.5%) at 12 months, and 0.80 (28.9%) at 2 years.

The results of this study support that oral bicalutamide has a favorable safety profile when used to treat FPHL. More than 95% of patients who started treatment with bicalutamide adhered to treatment. Thirteen patients discontinued the medication due to adverse effects, some of which may have been related to minoxidil rather than bicalutamide. In contrast to flutamide, the elevation in liver transaminases was mild in all cases. Bicalutamide can be considered as an antiandrogen in the treatment of FPHL. The use of concomitant medications and the retrospective design of this study limit the evaluation of efficacy.

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Patient-initiated online appointment scheduling: Pilot program at an urban academic dermatology practice

To the Editor: As health care becomes more technology driven, innovative strategies are being developed to improve the patient experience and access to care. One such tool is self-scheduling appointments online as an alternative to telephone scheduling.[1] The academic literature suggests that online scheduling promises to reduce no-show rates, appointment waiting times, and administrative burden, and improve patient satisfaction.[2] Our institution (Massachusetts General Hospital) recently enabled patient-initiated online scheduling functionality within the patient web portal. We wanted to explore the utility of this feature for our high-volume dermatology practice.

Between January 1, 2018, and July 31, 2019, 1303 established adult dermatology patients used online scheduling to book follow-up appointments. We performed a retrospective medical record review of these patients to evaluate demographics and use patterns and then compared them to patients who used traditional booking (telephone and in-person) to schedule follow-up visits during the same period.

Patients who used online scheduling were of similar race compared with patients who used traditional scheduling. Online schedulers were younger (mean [SD], 47.0 [15.9] vs 56.6 [18.9] years, $P < .0001$), and more were women (63.39% vs 59.11%, $P = .002$; Table I). Patients booked online at all hours of the day, with 45.82% (597 of 1303) doing so outside standard office hours (weekdays 8 AM-12 PM, 1-5 PM). Of patients who booked online, 71.91% (937 of 1303) used online web scheduling, and 28.09% (366 of 1303) used the mobile phone app. Patients who scheduled online had similar clinic attendance rates as those who booked traditionally