

# THE EFFICACY OF FLUTAMIDE IN THE TREATMENT OF HIRSUTISM

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## SUMMARY

The purpose of this study is to find out the efficacy of a new pure antiandrogen, flutamide in the treatment of hirsutism. Ten patients with peripheric hirsutism were assigned to the study to receive 250 mg of flutamide twice a day for 9 months. Ferriman Gallwey scores decreased significantly at the end of 9 months ( $p < 0.05$ ), with a mean regression of 46.4 %. The pure antiandrogen flutamide is an effective alternative in the treatment of hirsutism.

**Key words :** Flutamide, hirsutism.

## INTRODUCTION

Hirsutism refers to the development of excessive terminal hair on the face or body in women and is a sensitive marker for increased androgen action and respond to antiandrogen therapy (1). Among the antiandrogen drugs cyproterone acetate and spironolactone have been widely used in clinical trials (2-4). The efficacy of these two drugs have been limited by their relatively weak antiandrogenic activity and by undesirable pharmacologic properties (5,6).

Flutamide is a new pure nonsteroidal antiandrogen which has been highly successful in the treatment of prostate cancer. It has no glucocorticoid progestational, androgenic or estrogenic activity (7). The objective of the present study is to evaluate the efficacy of flutamide for the treatment of hirsutism.

## MATERIAL AND METHODS

Ten hirsute women who were given diagnosis of peripheric hirsutism were assigned to the study, after informed consent had been obtained. No patient had used any medication in the previous 6 months. Each patient underwent a complete medical and gynecological examination as well as endocrine profile, hematologic, hepatic and renal function

analyses. Hirsutism score was determined according to the Ferriman Gallwey scoring system (8). These tests were then repeated at 3,6 and 9 months of therapy. Each patient received 250 mg of flutamide twice a day for 9 months, and women were advised to use barrier methods of contraception during this study.

## Hormonal Assays

Serum T, DHEAS, FSH and LH levels were measured by radioimmunoassay (Coat A count, Diagnostic Products Corporation, Los Angeles, CA) The inter assay coefficients of variation were, 2.1 mcg/dl for DHEAS, 0.04 ng/ml for T.

## Statistical Analyses

The values were expressed as means + / -Sem. Comparison of the means were performed by the paired t test.

## RESULTS

Clinical data of 10 hirsute patients are presented in table I. Clinical improvement in the degree of hirsutism was observed in all patients. The Ferriman Gallwey scores for hirsutism decreased from a mean of  $21.2 \pm 6.05$  to  $16 \pm 6.68$ ,  $13 \pm 5.67$ ,  $11.4 \pm 5.06$  at the end of 3,6 and 9 months respectively ( $p > 0.05$ ,  $p < 0.05$ ,  $p < 0.05$ ). The percent of change in hirsutism score was 26.4 % at 3 months, 39.5 % at 6 months and 46.4 % at 9 months.

Dry skin and increased appetite was seen in 2 patients but no other serious side effects were observed in any of the patients. Hematologic, renal and liver tests remained within the normal range during treatment in all patients. Serum LH, FSH, T and DHEAS levels during treatment are presented in table II. There was no significant difference in any of the hormonal parameters during flutamide treatment.

## DISCUSSION

The present study has shown a significant clinical improvement in the degree of hirsutism in all patients with flutamide treatment. The decrease in hirsutism score was not significant by the 3rd month. However it achieved significance by the end of 6 months. Percent of change in FG scoring was 39.5 % and at the end of 9 months of therapy a mean regression of 46.4 % was obtained.

Flutamide is a pure antiandrogen, which mediates its action by competitive inhibition on target tissue at androgen receptor sites. Our study group only included the patients having normal glandular androgen activity with normal T and DHEAS levels, who are considered as peripheric hirsutism. It seems reasonable that a pure antiandrogen will be an ideal compound to block androgen activity especially in the peripheric hirsutism group.

Cusan et al (9) reported a rapid decrease in hirsutism score in 7 months in 20 patients with flutamide and oral contraceptive combination treatment. Sciara et al (10) treated 11 women with flutamide and an oral contraceptive and similar results were found. Recently Marcondes et al (11) reported a significant decrease in hirsutism score in 9 patients after 3 months of flutamide treatment alone.

The major side effects encountered after flutamide treatment were dry skin and increased appetite in 2 patients. As observed in the previous studies, the current study did not find any influence of flutamide on any of the hormonal parametres examined.

As a conclusion, the new pure antiandrogen flutamide is an effective alternative in the treatment of hirsutism.

Table I. Clinical data on 10 hirsute women treated with flutamide

No	Age	BMI	FG scores during treatment							
			Baseline	3 months	Change (%)	6 month	Change (%)	9 months	Change (%)	
1	21	20.2	32	27	18.5	24	25	21	34.3	
2	18	24.2	20	17	15	11	45	7	65	
3	23	25	23	17	26	12	47.8	11	52.1	
4	23	21.1	24	14	41	14	41.6	9	62.5	
5	19	31.3	27	27	0	20	25.9	17	37	
6	26	21.1	14	7	50	5	64.2	5	64.2	
7	20	22.5	24	15	37.5	9	62.5	10	58.3	
8	15	20	20	16	20	16	20	16	20	
9	23	15.2	13	10	23	10	23	9	30.7	
10	23	21.4	15	10	33.3	9	40	9	40	
Mean	21.1	22	21.2±6.05	16±6.68	26.43	13±5.67	39.5	11.4±5.06	46.4	
P value			p > 0.05			p < 0.05			p < 0.05	

Table II. Hormonal parameters during flutamide treatment

	Normal range	Baseline	3.months	6.months	9.months	p value
T	0-86	4.39 ± 17.5	41.0 ± 18.3	35 ± 16.6	30.9 ± 17.25	NS
DHEAS	35-430	178.8 ± 84.64	186.3 ± 109.3	141.1 ± 73.8	140.8 ± 69.3	NS
FSH	5-40	8.78 ± 3.85	8.12 ± 3.16	7.19 ± 2.78	6.92 ± 2.41	NS
LH	5-20	4.87 ± 5.39	4.18 ± 2.66	3.81 ± 2.37	3.85 ± 2.25	NS

T: TESTOSTERON

DHEAS : Dehydroepiandrosterone sulphate

FSH : Follicle stimulating hormone

LH: Luteinizing hormone

NS : Not significant

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