Clinical study

ANDROGEN HORMONE LEVELS IN WOMEN WITH MALE PATTERN BALDNESS

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ABSTRACT

Background Adrogen hormones in women with androgenetic alopecia (AA) were studied.

Materials and methods. The prospective study included 50 women with androgenetic alopecia in fertile age. Blood and urine were taken on the 7th and 21st day of the same menstrual cycle. Free testosterone (T), androstanediole (A-DIOL) and dehydroepiandrosterone (DHA) were assayed in serum. In the 24-hour urine T, DHA, androsterone (A), etiocholanolone (E) and 17-ketosteroid (17-KS) levels were monitored. *Results.* Statistical deviation from physiological levels was observed for serum T.

Conclusion. It is suggested that A-DIOL was possibly the principal androgen in etiopathogenesis of AA in women. The hormonal disorder seems to be expressed in the estrogen phase of the menstrual cycle.

KEY WORDS

alopecia, androgenetic, testosterone, androgen fractions, female sex

INTRODUCTION

The studies of metabolism and mechanisms of androgen action on the hair follicle as one of significant target units of androgenetic steroids have not significantly contributed to the solution of the basic dilemma: why and how do androgenetic hormones cause hair follicle involution constantly in the same regions of capillitium which are predisposed for androgenetic alopecia (AA), without disturbing the follicle function in the remaining regions? Neither do in vitro study methods (incubation of isolated hair roots with particular androgens and determination of metabolite concentration in incubates or fibroblast culture as a model of studying the androgen binding capacity by the skin) enable an exact insight into complex metabolic and biological processes induced by androgen steroids.

Special challenge in AA in women is due to the specificity of general hormonal milieu and to the fact that alopecia nevertheless represents stigmata of certain degree of androgenization[1]. This high incidence of AA in women is puzzling. Some authors