PREDICTIVE FACTORS FOR PREMATURE PUBARCHE IN A LARGE COHORT OF ITALIAN CHILDREN

Paolo Cavarzere, Bojana Caushi, Diego Ramaroli, Rossella Gaudino and Franco Antoniazzi

Division of Paediatric, Department of Mother and Child, University Hospital of Verona, Verona, Italy

The Authors declare that there is no conflict of interest that could compromise the impartiality of the research reported and that for this study no financial supports were requested

INTRODUCTION

Premature pubarche refers to the appearance of pubic hair without other signs of puberty or virilization before 8 years in girls and 9 years in boys.

The etiology of premature pubarche is not known. Early maturation of the zona reticularis of the adrenal cortex with consequent increase of adrenal androgens? Hypersensitivity of hair follicle to steroid hormones?

Predictor factors able to identify the evolution of premature pubarche are not known.

AIMS OF THE STUDY

To evaluate the etiology of premature pubarche in a cohort of Italian children

To detect some predictor factors able to identify how pubarche evolves

DESIGN

All children born between 2001 and 2014 referred to our Service for a premature pubarche were enrolled (n=334)

All of them were submitted to clinical exams (as bone age and hormonal levels) to identify the etiology of their premature pubarche

RESULTS

The only predictive factor for an idiopathic premature pubarche was the BMI

An early maturation of the zona reticularis of the adrenal cortex was identified by DHEAS levels higher than 40 µg/dL and by Δ4-androstenedione levels higher than 0.81 ng/mL

CONCLUSIONS

In most cases the premature pubarche was idiopathic, leading to an increased BMI

Higher values of DHEAS than 40 µg/dL and higher Δ4-androstenedione than 0.81 ng/mL suggest that premature pubarche was progressing.