Accelerated early pubertal progression, ovarian morphology, and ovarian function in prospectively followed low birth weight (LBW) girls


Abstract

Aim: To compare pubertal development in age-matched healthy girls born with low birth weight (LBW) or appropriate birth weight for gestational age (AGA). Subjects and methods: Girls with breast in Tanner stage II and normal body mass index were followed for 3 years with a complete physical exam, bone age, pelvic ultrasound, and measurement of gonadal hormones using a leuprolide test. Results: Forty-one girls (AGA 25/LBW 16) were followed up for 3 years. By 3 years, they had similar bone age, adjusted height, and body composition. In LBW girls, breast Tanner stage advanced faster during the first 2 years of follow-up, which was associated with higher serum androgens. Hirsutism score, ovarian volume, and number of follicles between AGA and LBW were not different nor age of menarche. By the third year, basal and poststimulated levels of gonadotropins and androgens anti-Müllerian hormone and inhibin B were similar in both groups and did not show differences related to birth weight or degree of catch-up growth. Conclusion: LBW recruits showed a slightly faster breast development but no differences in androgen excess signs, internal genitalia, and gonadal hormonal patterns.

Keywords

AMH, Birth weight, Growth, Puberty.