PCOS - the most common endocrine disease among young women. The prevalence of PCOS in Russian women aged 18-45 years is 6.4%. The manifestation of PCOS occurs at adolescence and early adulthood. Observation study the clinical outcome after a gap of 8 years, among adolescent girls with confirmed menstrual irregularity (prolonged oligomenorrhea), selected earlier in population-based study (2005). What is the prolonged oligomenorrhea increased risk of developing PCOS at early adulthood?

Objective: to evaluate the predictive value of girls menstrual irregularities and hyperandrogenism for clinical manifestation PCOS in the adolescent.

Methods: 560 girls aged 12-16 years from a large population-based cohort (study prevalence of overweight and obesity in adolescents, Moscow region, 2005) were recruited. Anthropometric measurements (height, weight, body mass index BMI) were evaluated. Overweight was defined as a BMI>=85th percentile, and obesity >=97th percentile for adolescents. The pubertal stages were determined by visual inspection, using Tanner's criteria (1965). Age at menarche was retrospectively ascertained. Clinical hyperandrogenism (HA) was quantified using Ferriman-Gallwey scores. 64 subjects were recruited from a total of 560 adolescents (menstrual irregularities after 1 year postmenarche, including - 50 oligomenorrhea, - menstrual cycles more than 35 d in length). 39 adolescents with oligomenorrhea at the study period were evaluated in 2005 and 2013 years.

Results: puberty in a population of adolescent of Moscow occurs in the terms corresponding modern parameters, specified in works of the European authors and the USA: median age at menarche was 12,4 yr [11,3; 13,5], breast stages 5 for girls was 16 yr [15; 17], pubic hair stages 5 for girls was 15 yr [14; 16]. 14% girls (64/560) presented with menstrual disorders by 1 year postmenarche, including 39 girls with oligomenorrhea at the study period. The prevalence of manifest hypothyroidism in adolescents with oligomenorrhea was 3% (1/39), overweight 13% (5/39), weight deficiency 5% (2/39), hirsutism 5% (2/39). After 8 years (2013) the prevalence oligomenorrhea was 46% (18/39), overweight 5% (2/39), weight deficiency 10% (4/39), hirsutism 20% (8/39), acne 35% (14/39) in reproductive-aged women 24 yr [23; 25].

Conclusion: During the natural current of puberty we have spontaneous restoration of menstrual cycle and ovulation. Prolonged oligomenorrhea is a powerful risk factor of PCOS. Although irregular menstrual cycles cannot be the sole criterion for PCOS, they comprise an important symptom that should be followed in the adolescent. When oligomenorrhea is persistent or presents in conjunction with symptoms of androgen excess, further evaluation for PCOS is recommended.