A child's health is considerably determined by the features of their perinatal life. The influence of pathological changes in the reproductive function of mothers on the formation of menstrual dysfunction (MD) in daughters has been abundantly studied; while the features of perinatal history and reproductive function of mothers of the girls with secondary amenorrhea (SA) have not been studied sufficiently regardless of the urgency of the problem. Pathological pregnancy can cause fetal development disorders; today, it’s well known that pathological pregnancy can also lead to an increase in perinatal morbidity rate, postnatal adaptation disorders, failures of postnatal adaptation; it negatively affects the formation of neuroendocrine regulation and thus causes a decrease in the reproductive potential in young women. It should be taken into account that a reproductive system disorder occurred in a woman at the prenatal stage of development is more influential for the female reproductive system functioning than a disorder occurred during the postnatal development: it determines her lifetime reproductive system functional abilities.

Among the number of different menstrual disorders, secondary amenorrhea (SA) occurring at puberty is considered a prognostically unfavorable disorder. The comparison of the clinical data obtained during preventive examination of numerous groups of adolescent girls in 1978-1979 and 2007-2008 has shown that the occurrence of SA in adolescent girls has increased twice over the past 30 years.

**The main objective** of the study was to determine the features of perinatal history and reproductive status of mothers of the adolescent girls with SA.

**Methods.** Perinatal histories of 172 adolescent girls aged 13 to 17 years with SA and reproductive status of their mothers have been studied. The obtained data have been compared to those of 102 age-matched girls with a regular menstrual cycle (control group: CG). The study group was divided into 3 clinical groups: group I (n=77, with menstruations not more often than once in 6 months starting from menarche); group II (n=70, with more MD preceding the formation of SA); group III (n=25 with a regular menstrual cycle preceding the formation of SA). In the patients’ mothers, among perinatal history events, the most attention was given
to such perinatal events as gestosis, an increased risk of miscarriage, various types of anemias, fetoplacental insufficiency, various delivery features such as premature delivery, rapid delivery, weak labour, operative delivery. In the patients, the most attention was given to their perinatal condition: body weight deficit or excessive body weight; distress syndrome.

Data obtained from the patients with SA corresponded to the data obtained from the adolescent girls from Kharkiv region examined during a population study. The informed agreement to participate in the study had been obtained from the legal representatives of the patients with SA and adolescent girls consisting the control group. The study had been approved by the Bioethics Committee of the State Institution.

**Statistical treatment:** Statgraphics; Fisher's exact test; odds ratio (OR) with 95% confidence interval (CI) was used to calculate the probability of SA formation.

**Results.** The mothers of girls with SA had abnormal course of pregnancy in 43,6 % of cases and various complications during delivery in 25,6 %. Group III did not have significant difference for the occurrence of unfavorable factors in their perinatal history or their mothers’ delivery history as compared to CG. Hazard of miscarriage was twice as frequent in the perinatal history of group I as compared to CG (23,4 % and 11,8 % respectively, P<0,05). In group I, OR for hazard of miscarriage was 2,28 (CI 1,03-5,1).

Group II patients had lower birth weight more frequently than CG (10,3 % and 3,3 % respectively; P<0,05) and/or were operatively delivered (20,0 % and 6,9 % respectively, P<0,05). In group II, OR for low birth weight was 1,45 (CI 1,09-16,7); for operative delivery - 3,39 (CI 1,29-8,91). The mothers of group I and group II patients had twice as frequent occurrence of hypomenstrual syndrome (oligomenorrhea or SA in their history) than the mothers of CG (21,8 % and 11,8 %, P<0,05). OR for hypomenstrual syndrome was 2,09 (CI 1,02-4,28); it means that the probability of developing SA immediately after menarche or precedent MD is twice as high for a girl whose mother has oligomenorrhea or SA in her
history. In the mothers of group I and group II patients, primary amenorrhea was 17-fold as frequent as in the mothers of CG (16.3 % and 0.98 % respectively, \( P < 0.001 \)). OR for primary amenorrhea was 16.4 (CI 1.96-16.38). The obtained data confirm both the significance of hereditary factors in the formation of SA, and the conception of Yu.A.Gurkin concerning a "perinatal trace" in child gynecology; nevertheless, the fact that women with reproductive disorders occurring before pregnancy more frequently have pathologic pregnancy and delivery, should also be considered.

**Conclusions.** 1. The most important unfavorable factor of the formation of SA in adolescent girls is late menarche in their mothers. The probability for the girls born from mothers with late menarche to develop SA immediately after menarche or after preceding MD, is 16-fold increased.

2. A significant unfavorable factor, 3-fold increasing the risk of the transformation of oligomenorrhea or pubertal uterine bleeding into SA, is low birth weight registered in the patient's history.

3. The obtained OR values can be used in child gynecology, pediatrics, family medicine in order to identify the groups of risk for SA to be surveyed and prevented, and the reproductive potential of adolescent girls to be increased.

**Key words:** perinatal history, adolescent girls, secondary amenorrhea, risk factors.