

The significance of low and high birth weight in the characteristics of women reproductive health

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Objective

The development of ideas about fetal programming makes it possible to explain the origins of a number of extragenital diseases from a perspective of the effects of depletion of the compensatory mechanisms of the body in early stages of ontogenesis. The increasing frequency of birth of infants with low weight due to an intrauterine retardation or premature birth justifies the urgency of defining more precisely the characteristics of the menstrual and reproductive function in women who were born with low birth weight (LBW). For the purpose of understanding the significance of this relationship, an alternative group and a study of the relevant aspects in women who were born large for gestational age (LGA) are of interest.

Methods

220 clinical observations of apparently healthy women of reproductive age were studied, with 98 of them (group I) born with a weight of 2, 500 g and less and 120 (group II) with a weight of 4, 000 g or more. Characteristics of the menstrual function, a spectrum of gynecological pathology, and the need for therapeutic and surgical intervention were assessed.

Results

The groups were congenerous by age, social status, ethnic composition, and economic status. Late menarche was detected in 9, 8% of the LBW women, which was nearly twice as high than the general population frequency (5, 7%), and in 7, 5% in the group of women who were born LGA. None of the women under observation reported an early onset of menstruation or the presence of signs of premature puberty. Infertility was noted by 25% in group I and by 15% in group II of the women. 21, 5% of the LGA women and 14% of the LBW women reported menstrual disorders. The frequency of gynecological pathology requiring surgical intervention was 23, 5% and 18% in groups I and II, respectively. Thus, as we have shown, deviations from the average parameters at birth correlate with hormonal-metabolic disorders and genital pathology that do not respond to conservative treatment, which is especially important in the case of LBW. This fact is consistent with literature data that LBW children have a higher incidence of gonadal dysfunction and sexual maturation deviations (SE Wennerstrom et al., 2015). There is no agreement of opinion on specific forms of this pathology. On the one hand, the relationship between LBW and early puberty has been demonstrated (Ibanez L. et al., 1999). On the other hand, it was noted that LBW girls reach timely puberty, but later this process progresses at a faster rate (Ibanez L. et al., 2007), and this is due to the fact that the prenatal period is the most dynamic for ovarian development.

Conclusion

The obtained data on sexual development retardation and a high incidence of subsequent infertility in LBW women is consistent with the literary data reflecting the parallelism of women's ability to conceive with mass-growth parameters at birth. Mechanisms for the formation of interrelations need separate research.