

REDUCTIONAL LIMB DEVELOPMENT MALFORMATIONS

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In recent decades in many countries there has been an increase in congenital and hereditary pathologies, which causes high perinatal and infant morbidity and mortality. The study and analysis of data on the influence of unfavorable exogenous factors on human embryogenesis makes it possible to prevent the occurrence of congenital malformations and the birth of children with this pathology.

Keywords: reduction malformations, developmental anomalies, etiology, embryogenesis, fetus, prenatal diagnosis.

Congenital malformations are a pressing problem of our time. Exposure to exogenous environmental factors has a negative impact on a woman's reproductive system and leads to disruption of the physiological relationship between the maternal body and the fetus.

Reduction malformations are malformations that are based on a stop in the formation or insufficient formation of parts of the skeleton. These malformations are manifested by aplasia or hypoplasia of certain anatomical structures. The nosological forms of malformations of this group are based on the localization and nature of bone tissue damage [1]. Potential factors for the development of reduction limb defects are: previous viral and bacterial infections during pregnancy; maternal somatic pathology; exposure to adverse physical factors (radiation, vibration, hyperthermia); hypovitaminosis and lack of microelements; alcohol, drug, nicotine addiction. According to various authors, 20% of anomalies are of a multifactorial nature, in 6% of cases the etiological factor is heredity (gene and chromosomal disorders). Also in the formation of malformations, the role of infectious diseases of the mother (2–3%), diabetes (1.5%) and other chronic pathologies (less than 1.5%), and taking medications (1–2%) was revealed. In 50–70% of cases, the etiology of the anomalies could not be determined [2].

To reduce the risk of having sick children, it is advisable to carry out so-called periconceptional prophylaxis, which is aimed at providing optimal conditions for the maturation of germ cells, their fertilization and the formation of a zygote, its implantation and early development of the fetus. Periconceptional prevention includes the following stages: medical genetic counseling (MGC), pedigree study, determination of karyotype and HLA antigens in spouses; diagnosis of carriage of viral and bacterial infections, treatment according to indications; exclusion of occupational hazards; eliminating bad habits; diet and vitamin therapy, taking folic acid (up to 4 mg per day) [3].

BIBLIOGRAPHY

1. Human teratology. Guide for doctors/Kirillova I. A., [etc.]; edited by G. I. Lazyuka . — 2nd ed., revised . and additional - Zh: Medicine, 1991. - 480 p.: ill.
2. Ershova-Pavlova A. A. et al. Structure congenital vices development V Belarus , Structure of congenital malformations in Belarus // Sakharov readings 2018: Environmental problems of the XXI century. - 2018. – S. 252.
3. Kokorina N. V. Teratogenesis : educational manual // N. V. Kokorina, L. V. Grik , E. N. Alferovich 2018. - 64 p.

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