

СЕКЦІЯ 13. ЗАСТОСУВАННЯ КОМП'ЮТЕРНИХ ТЕХНОЛОГІЙ ДЛЯ ВИРІШЕННЯ НАУКОВИХ І СОЦІАЛЬНИХ ПРОБЛЕМ У МЕДИЦИНІ

SIGNIFICANCE OF ULTRASONIC DIAGNOSTICS OF CONGENITAL MALFORMATIONS TO REDUCE REPRODUCTIVE LOSSES

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Reproductive losses, including spontaneous and medical abortions, ectopic pregnancy and missed miscarriage, stillbirths and mortality of children under 1 year of life, are partially controlled. The main goal of medical influence and a reserve for increasing fertility is to reduce miscarriage. Among all the causes of miscarriage, special attention is paid to congenital malformations of the fetus. Early detection of fetal malformations is carried out using biochemical, cytogenetic tests and ultrasound examinations (hereinafter – USE); allows you to make a timely decision about an abortion or a therapeutic intervention to regulate the functioning of the folate cycle genes [1], responsible for the most severe malformations, which include heart defects, neural tube defects and Down syndrome [2].

Annually, from 100 to 150 thousand ultrasound examinations are carried out in Ukraine in connection with suspected fetal malformations (from 5 to 18 thousand in the Kharkov region) [3]. In total, from 2008 to 2018, from 100 to 350 malformations of the fetus were detected annually in the Kharkov region, for the first time using USE, up to 80%. USE also allows to detect fetoplacental insufficiency, intrauterine growth retardation and extragenital pathology, which significantly worsen the prognosis of gestation.

Medical and preventive institutions of Ukraine and Kharkiv region are sufficiently provided with equipment for USE. In total, more than 25 million ultrasound examinations (more than 2 million in the Kharkiv region) are carried out annually in Ukraine, of which 1.3 million pass during pregnancy (in the Kharkiv region - more than 120 thousand) [3]. For detection of fetal malformations ultrasound is appointed in terms of pregnancy 11-14, 19-21 and 30-33 weeks. In case of suspected developmental defects, they study the bones of the skull, the basic structures of the brain and spinal cord, collar space, profile of the orbits, and nasal bones. In the study of ultrasound anatomy determine the orientation and development of the heart, anterior abdominal cavity, stomach, intestines, bladder, vertebral trunk and extremities. Multiple ultrasound during pregnancy does not threaten the health of the fetus, but rather allows timely detection of congenital malformations.

References:

1. Alieva T.D.K. Principles of risk prevention of early reproductive losses in the context of oligonucleotide polymorphism of folate cycle genes / T.D.K. Alieva // Bull KhRIPHS. - 2019. - Vol. 89, No. 3. - P. 4-23. DOI: 10.5281/zenodo.3582796 (ukr.). 2. Malformations // World Health Organization, September 7, 2016. URL: <https://www.who.int/en/news-room/fact-sheets/detail/congenital-anomalies> (rus.) 3. Statistical data on the incidence of ukrainian and medical care for 1993-2018 // Medical Statistics Center of the Ministry of Health of Ukraine. URL: <http://medstat.gov.ua/ukr/statdan.html> (ukr.)