## FEATURES OF EARLY ADAPTATION AT NEWBORN HIGH INFECTIOUS RISK

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*With the purpose optimization of tactics conducting was surveyed 156 newborn from the mothers with chronic infectious diseases (ChID). Was established, that ChID of the mother renders serious adverse influence on a condition of a fetus and current of early adaptation at newborn, resulting to development hypoxic, infectious and toxic defeats of brain (49,6 %), intrauterine hypotrophy (29,4 %), intrauterine and postnatal infection (30,4%). Was established 4 variants of current early neonatal of the period depending on a condition of the child at birth and dynamics of a condition at the first hours o'clock. For newborn high infectious risk (even clinical healthy) are characteristic the infringements hemodynamics (later closing of fetal communications, decrease contractile activity of myocardium, high common peripheral vascular resistance, arterial hypotension), endocrine of adaptation (low level adrenocorticotropin and cortisone), metabolism (decompensated metabolic and respiratory-metabolic acidosis, increase activity of blood enzyme), the change of the factors of specific and not specific protection (hypoimmunoglobulinaemia G is less 9,8 g/l, the decrease of a level scale gamma-interferon is less 8 ME, the increase of parameters activity peroxide oxidation of lipids - MDA is more 6 ng/ml).*

## DISTURBANCES IN HYPOTHALAMIC REGULATION OF REPRODUCTIVE FUNCTION UNDER THE INFLUENCE OF XENOBIOTICS

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***Objective:*** *The experimental study of the mechanism of non-specific character of the female reproductive system responce to xenobiotics possesing a neurotoxic (toluene, dioxane) or gonadotoxic effects (formaldehyde).*

***Methods:*** *The gonadoliberin (GnRH) content in preoptic area of hypothalamus and medial eminence was estimated by radioimmunoassay. Biogenic amines and their metabolites were determined by HPLC with electrochemical detection, the intensity of free radicals oxidation (FRO) and total antioxidative activity - by chemiluminescent methods. The measurement of lipids and proteins peroxidation as well as activity of antioxidative enzymes (superoxide dismutase, catalase and glutathione peroxidase) has been also performed.*

***Results:*** *It has been shown in experiments on Wistar female rats that changes of normal circadian rhythm of GnRH secretion are revealed as the first signs of reproductive system disfunction at chronic inhalation of toluene and dioxane, but not formaldehyde. Early disturbances in GnRH production are connected with the alterations in neurotransmitter systems controlling this process, especially in preoptic area enriched with dopaminergic and serotoninergic terminals. The circadian rhythms of FRO intensity and lipids peroxidation are also disturbed under the influence of xenobiotics, that is however lacking at comparison with proteins peroxidation and activity of antioxidant systems. This suggests about the relative stability of proteins and mechanisms of antioxidative defence towards the action of pollutants.The failure of normal rhythmicity of processes studied could be considered as a consequence of desynchronization of oscillator function of suprachiasmatic nucleus of hypothalamus and pineal gland (melatonin secretion) under the influence of xenobiotics.*

***Conclusion:*** *The disturbances of circadian rhythms of regulatory processes in hypothalamus including reproductive function could be regarded as a common reaction of an organism to xenobiotics possesing a neurotoxic effect.*