

Respiratory insufficiency in premature children

Pathology of respiratory system plays a significant role in morbidity and mortality of premature neonates and it means that searching of new and remodeling of existing methods to diagnose and treat respiratory insufficiency (RI) is of particular importance. We evaluated a new method of an early preclinical diagnosis of RI based on using of capnography – assessment of end-tidal CO₂ concentration, which makes possible to propose a leading pathophysiological mechanism of RI. Using of the gradient between end-tidal and capillary CO₂ concentrations helps to predict development of serious ventilation-perfusion mismatch when it exceeds 20 mm Hg. So, in the treatment of RI in neonates individualized therapy should be used, based on the assessment of the leading pathophysiological mechanism.

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Medico-social and demographical tendencies in forming of reproductive health

In the article the medico-social and demographical tendencies in forming of reproductive health are minutely considered. Among them there are: mass prevalence of little number of children in the family, postponement of the date of the first child's birth, increase of illegitimate birth rate and change of optimal reproductive age coefficients of women groups may be mentioned. Changes of reproductive conduct have the great significance in the organization of obstetric-gynaecological care. Methods of dispensary observation including psychological training of married couples for delivery demand perfection. Pregnancy and delivery conducting of women incoming the groups of high risk of maternal and perinatal pathology also expects attention.

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Infections in Pregnant Women (diagnosis, treatment, prophylaxis)

The article presents a review of new literature and own data resulted from a many-years study of infections in pregnant women. Pathogenesis and diagnosis of transplacental infections which demand serologic screening, prophylaxis and treatment of pregnant women is discussed. Attention is paid to urogenital infections (chlamydiosis, genital herpes, candidiasis, trichomoniasis), genital colonization with group B streptococci, mycoplasma, association of different bacteria. Informative methods of laboratory diagnosis and schemes of antibacterial therapy are given.

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Modern views on cure-diagnostics tactics of pregnancy and delivery observation in women with pelvic traumas and post-traumatic altering support-moving apparatus (literature review)

The modern literature review concerning diagnostic and cure tactics during observation of pregnancy and delivery in women with pelvic traumas and post-traumatic altering support-moving apparatus is presented in this article. The diagnostic tactics based on the accurate assess of clinical data and on analysis of laboratory and instrumental research methods have been substantiated for estimation of pregnant woman and fetus conditions with available pelvic injures. It allows make more exact prognosis, select criteria of pregnant for the conservative conduction; establish indices for the operational cure.

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Particularities of morphogenesis of human fetus brain

The review is devoted to the basic events of human fetal CNS development. The cellular processes of two broad phases of cerebral morphogenesis – cytogenesis/histogenesis and differentiation/growth – are described. In this review we also concern the main regressive events in the CNS development such as programmed cell death (apoptosis), axonal pruning and synaptic elimination. Different environmental factors may effect human brain development even from its early stages causing brain injury that can result in major or minor cerebral malformations. So, the knowledge of the main questions of fetal brain morphogenesis can help to prevent some abnormalities of CNS in the future child development.