APOTOPSIS IN MULTIPLE SCLEROSIS IN CHILDREN
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There are presented data of the investigation of 122 children with multiple sclerosis (MS). The concentration of factors and inducers of apoptosis has been established to increase in acute relapses of MS in children and to decrease during the remission of the disease. Changes in the content of studied markers of programmed cell death in the examined patients are the evidence that MS in children is a form of pathology associated with a marked increase in apoptosis. The investigation patterns of changes in serum levels of factors and inducers of apoptosis in MS permit to apply them as additional molecular markers of activity of MS course and assessment of the therapeutic efficacy. Complex study of neurological and somatic status of children with MS, in conjunction with the evaluation of factors and inducers of apoptosis in blood, fill up diagnostic criteria for estimation of the activity of MS and can be recommended for use in specialized clinical units.
Keywords: multiple sclerosis in children, factors of apoptosis, Annexin V, cytokines, nitric oxide, the diagnostic criteria of activity, treatment with interferon beta-1a preparations.

PERSISTENCE OF VIRAL INFECTION IN ATOPIC ASTHMA IN CHILDREN
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There are presented data on the high rate of infection with viral and bacterial respiratory pathogens, having largely associative character, in children with asthma. Latent persistence of these agents is shown to contribute to the aggravation of chronic inflammation in bronchi, development of secondary immunosuppression in the formation of which significant importance may belong to essential disorders of apoptosis of immune cells, found in the examined children.
Keywords: viruses, persistence, asthma, apoptosis, immunosuppression.

FEATURES OF CELLULAR IMMUNITY IN INFANTS WITH INTRAUTERINE INFECTIONS
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The data on the effect of intrauterine infection in newborns on the subpopulation composition of lymphocytes are presented. Options The variants of clinical and immunological response of the body of the child to intrauterine infection are identified.
Keywords: intrauterine infection, newborn infants, the immune response, T- and B-lymphocytes.

NEPHROSCINTIGRAPHY AND CYTOKINES IN THE DIAGNOSIS OF KIDNEY LESIONS IN VESICOURETERAL REFUX IN CHILDREN
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There presented data of the examination of 76 children aged 2 to 16 years, with different grades of vesicoureteral reflux (VUR), one and bilateral lesions were detected in the ratio of 52.6% and 47.3%, respectively. The detection of a functioning renal tissue was performed with static nephroscintigraphy with 99mTc radiopharmaceutical Technemek 99mTc (99mTc labeled dimercaptosuccinic acid, (99m)Tc-DMSA), having activity of 80-600 megabecquerel (MBq), determined with dose calibrator. During static nephroscintigraphy kidney damage of varying severity were observed in all patients. 2-fold reduction of functioning parenchyma in the affected kidney was observed in patients beginning from VUR grade .3. The found evidences show that main factors of renal function disorders are not only the reflux grade, but also the type of nephrosclerosis, or their association, especially in bilateral VUR in children. The obtained data indicate that VUR in children causes changes in the structural and functional state of the kidneys. In this nephroscintigraphy allows to adequately assess functional status and renal parenchyma reserve in children with VUR.
Keywords: nephroscintigraphy, vesicoureteral reflux in children, cytokines, nephrosclerosis.

Abstracts of the articles

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FEATURES OF ENDOSCOPIC TREATMENT OF ESOPHAGEAL VARICES IN PORTAL HYPERTENSION IN CHILDREN


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The data of a comprehensive analysis of endoscopically identified structural and functional changes in esophageal varices according to nosology and features of the underlying disease are presented. On this basis there is proposed classification of esophageal varices for adequate assessment of the dynamics of the pathological process and tactics of medical measures to prevent the development of esophageal-gastric bleedings.

Keywords: Endoscopy, children, varicose of esophageal veins, sclerotherapy

POSSIBILITIES OF ULTRASONIC DIAGNOSTICS IN ASSESSMENT OF EXTENT OF FIBROSIS (STAGE) IN CHILDREN WITH CHRONIC HEPATITISES


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There are presented data of the examination of 127 children with chronic hepatitis of different etiology. for assessment of the stage of liver fibrosis by means of quantitative evaluation of the structure of the liver parenchyma the innovative non-invasive ultrasound techniques: fibroelastometry and acoustic structure quantification were used. these methods with color coding, histograms and determining the density were found to identify areas of fibrous tissue of the liver, which characterize the process of organ fibrosis by the steady increase in the values of the index of density: in children from reference group it was 0.98 standard units, in cases with minimal to moderate fibrosis - 1.56 relative units, with advanced fibrosis - 2.43 relative units and in cirrhosis of the liver - 3.25 relative units. obtained objective data can be used for assessment of the stage of fibrosis in children with chronic hepatitis b in the presence of contraindications for liver biopsy.

Keywords: ultrasound diagnosis, quantitative evaluation of the structure of the liver parenchyma, chronic hepatitis, fibrosis stages

MEDICAL, PSYCHOLOGICAL AND EDUCATIONAL ASSISTANCE TO HANDICAPPED CHILDREN

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There are presented data of analysis of the condition of medical and psycho-educational assistance to young children in primary health care unit. It is shown that the dynamics of the indices of health state of young children should not be uniquely defined as negative. It was found that congenital anomalies may be classified as socially important pathologies, as they lead to the formation of disability in children, define its structure and are one of the leading causes of infant mortality. Among children of 1 year of age detection rate of diseases of the genitourinary system increased by by 48.3%, congenital anomalies - by 43.2%, diseases of the nervous system – by 42.2%, diseases of the eye and adnexa - by 33.4% . The authors propose to create and introduce into the practice of medicine the multilevel system of complex rehabilitation of children with chronic pathology and handicapped children.

Keywords: congenital anomalies, the detection rate of pathology, health state of young children, the system of the complex rehabilitation of children with chronic disease and handicapped children

SCIENTIFIC AND METHODOLOGICAL BASIS OF THE DOCTOR’S ACTIVITIES ON THE HYGIENE OF CHILDREN AND ADOLESCENTS IN CHILDREN'S POLYCLINIC (DEPARTMENT)

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Methodological bases of hygiene of children and adolescents as an independent scientific discipline and practice activity allow to determine the area and the algorithm of activity of the doctor on hygiene of children and adolescents in children's polyclinic (department). Necessary knowledge, skills, experiences and functions of the doctor on hygiene of children and adolescents in children's polyclinic (department) have been stated.

Keywords: prevention; hygiene of children and adolescents; health care for children
FEATURES OF EMOTIONAL STATE IN SCHOOLCHILDREN DURING THE SCHOOL YEAR
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Presented data from studies of psycho emotional state of schoolchildren aged 7-17 years suggest that in different types of educational institutions, examined students have dynamic psychological characteristics with varying levels of anxiety, they have a decrease of the compensatory-adaptive mechanisms during the school year, and training activities is carried out with using reserve capacities of the growing organism.
Keywords: psycho-emotional state school, anxiety, functional disorders

GENDER PECULIARITIES OF QUALITY OF LIFE AND THE HEALTH OF ADOLESCENTS
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There are presented data of the study of parameters of quality of life of adolescents with questionnaire PedsQL™ 4.0. 994 adolescents (457 boys and 537 girls) aged 14-16 years were examined. Gender peculiarities of parameters of quality of life of adolescents in Barnaul were shown to be characterized by a predominance of all indices and all scales of questionnaire in boys, the high (regardless of gender) levels of social and physical functioning, as well as low level of school functioning in boys and emotional functioning in girls. The level of quality of life and health status of girls was established to be significantly lower than that of boys. A clear downward trend in the quality of life of adolescents from I to III group health has been revealed. It that the emotional and school functioning is shown to be largely determined by gender and age characteristics of adolescents.
Keywords: adolescents, quality of life, gender peculiarities, state of health

EUGENICS: FROM A UTOPIA TO SCIENCE AND … FROM SCIENCE TO A UTOPIA?
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Historical and philosophical analysis of the phenomenon of “homemade eugenics” - the possibility of “fabrication” of children with desired genetic properties, as part of the social and ethical and legal problems of the use of modern genetic technologies in Pediatrics is presented. Historical sources of “eugenic project,” especially on “eugenics according to Galton” being discussed, the history of eugenics is considered as a special line of evolution of utopian consciousness.
Keywords: genetic technologies in Pediatrics, eugenics, ethical and legal issues

MODERN POSSIBILITIES OF STUDIES OF CELLULAR COMPOSITION OF URINE
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The characteristics of the modern automatic urine analyzer, which allows to objectify the process of the quantitative calculation of elements of the urinary sediment are presented. The analyzer is able to count up to 65,000 particles per microliter. Additional options provide the possibility to determine the number of dismorphic red blood cells and to give preliminary report about the ratio of leukocyte populations in the urine and affiliations of bacteria to the gram-positive or gram-negative flora. A separate task is the need to develop reference ranges of indices of cellular composition of urine in respect to the automatic analyzer.
Keywords: automatic urine analyzer, counting elements of the urinary sediment, development of reference ranges