SMALL DEVELOPMENTAL ANOMALIES;
THEIR FEATURES IN SOME MULTIFACTORIAL DISEASES

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In different historical periods, people with developmental disorders and small developmental abnormalities (SDA) were considered either «a product of evil forces» or «saints». Various theories were put forward, such as the anthropological theory of C. Lambroso, which led to the forced sterilization of the so-called «degenerative types». But gradually the view of this problem has changed, and now most researchers are studying SDA from the standpoint of their role in the occurrence and course of diseases of different etiology.

Adverse exogenous and endogenous factors can make significant changes in the development of organs and systems of the body and leads to the formation of congenital malformations. Insignificant intensity of environmental factors or their action at the moments adjacent to the «critical periods» of embryonic development of the organism, entails the formation of the so-called «small» malformations.

In clinical genetics and syndromology, SDA is a fairly important diagnostic sign, which may indicate a high probability of complex morphogenesis disorders in the form of congenital malformations that require special diagnosis, and, at times, surgical intervention. The diagnostic value of SDA is quite diverse, and it is crucial to take into account their number.

Materials and methods: 119 adolescent with the hypothalamic syndrome of puberty (gr. I), 43 children, whose parents had experienced radiation impact in childhood and adolescence, owing to the Chernobyl disaster (gr. II), 41 children under 3 with an impaired psychomotor development (gr. III), and 60 children of the control group took part in the study. The authors used the scheme, developed in the department of clinical genetics and ultrasound diagnosis of Kharkiv Medical Academy of Postgraduate Education (KMAPE), Merks N. M. classification.

Results and discussion. More than 6 SDA have been registered in the examined children. A higher SDA concentration in the cranio-facial area has been revealed in the patient from gr. II and gr. III.

Conclusions. More then 6 SDA have been registered in our patient significantly more often, an average level of stigmatization (7-10 SDA) has been observed mainly in children of the groups under investigation. The revealed spectrum of SDA can testify to the congenital or acquired defects in collagen biosynthesis, and, as a consequence, to the connective tissue dysfunction.

CLINICAL AND LABORATORY STUDIES OF RHEUMATOID ARTHRITIS

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Introduction. Nowadays, the problem of bone and muscular pathology is at the center of attention of the world scientific community. Rheumatoid arthritis (RA) is a severe chronic inflammatory disease that affects from 0,5 to 2% of people worldwide (women are 5 times more likely to be ill than men).

Despite the large number of scientific papers on etiopathogenesis, clinical manifestations of pharmacotherapy of rheumatoid arthritis, the method of laboratory diagnosis at early stages of the disease that would be available and the most diagnostically significant is given insufficient attention.

Aim. To analyses of scientific works from the problems of clinical laboratory diagnostics of rheumatoid arthritis.

Materials and methods. The following methods were used: theoretical analysis, study of scientific literary sources.

Results and discussion. In the analysis of literary sources, it was established that the main method of diagnosis of RA is to determine the concentration of C-reactive protein (CRP). In the norm, the concentration of CRP in serum is 0-5 mg/l (in the newborns, the CRP does not exceed 4,2 mg/l and in children it is 2,8 mg/l).

The serum concentration of CRP increases to 5 ml/l after 6 hours of activation of its synthesis in hepatocytes. In the absence of reasons, a slight increase in CRP may indicate chronic inflammation of the vascular wall, i.e. atherosclerosis. The determination of CRP allows for a more accurate assessment of the degree of activity of this disease, given that the protein concentration increases with increased cardiovascular risk.

Determination of the concentration of CRP is carried out with the help of classical and highly sensitive methods: radial immunodiffusion and immune-neoplometry. They are used to detect the level of CRP in acute inflammation. This method is very sensitive and allows to determine the concentration of CRP, which is lower than 5 mg/l.

During the past 70 years, the RA standard marker is a rheumatoid factor (RF), but it is not a sufficiently specific indicator and can be found not only in RA but also in chronic infections and malignant neoplasms. Standard methods for determining the level of the RF are the agglutination reaction (latex test or Vaaler-Rose reaction) and the enzyme-linked immunosorbent assay. The most diagnostic value is the definition of IgM RF, with the diagnostic sensitivity reaches 50-90 %.

In addition to these indicators, an increase in fibrinogen occurs in RA, which is associated with the activity of the inflammatory process. Determination is performed using nephelometry and coagulant test. Therefore, it can act as an additional diagnostic criterion. A secondary indicator characterizing the process of chronic inflammation during RA is an increase in the erythrocyte's sedimentation rate (ESR), which is determined by the method of Vesteringer.

Conclusions. Having analyzed the literature dates, it has been established that the most significant diagnostic value for both early detections of RA and chronic inflammation has a C-reactive protein. Equally important is rheumatoid factor, especially IgM RF. Additional laboratory methods include the study of fibrinogen and ESR.

MODERN STATE OF DIAGNOSTICS OF CANCER IN UKRAINE

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Introduction. The ecological crisis that swept the world in recent decades has posed to humanity almost the most difficult medical, social and economic problem − the irregular growth of cancer morbidity and mortality. Every year in the world more than 10 million new cases of cancer are registered and about 6 million deaths from them. Experts predict that in 2020 these figures will be 20 and 10 million respectively. Given this, the timely diagnosis of oncological diseases takes on special significance.

Aim. To conduct a retrospective analysis of the state of development of modern world technologies in the diagnosis of various types of cancer.

Materials and methods. statistical, epidemiological analysis, analysis of literary data.

Results and discussion. Today, in the diagnosis of cancer, apply general standards, which must be followed by all medical institutions and clinics oncology profile. Their main provisions are consistent with the standards of treatment in most European countries, the United States and Japan. Diagnosis of cancer is based on methods: clinical, instrumental researches. But despite this, the provision of assistance to cancer patients in our country today, unfortunately, has its own difficulties. The main problem is the lack of modern USD diagnostic tools for expert class, endoscopic devices, mammographs, immuno-enzyme and hematological analyzers etc. It is known that up-to-date endoscopic equipment increases the incidence of in-situ stomach cancer by 10%. Most of the equipment requires the replacement of gamma-cameras, X-ray machines, infusomats, tracking equipment. The problem of medical staff is also acute.