Aim. To evaluate the clotting, anticoagulant and fibrinolytic activity of blood in patients with acute coronary heart disease (ACHD) and to determine the peculiarities of changes when combined with ACHD and DM2.

Materials and methods. 60 persons were diagnosed MI with ST-segment elevation, MI without ST-segment elevation, unstable angina. Among them: 30 patients with ACHD (Group I), 30 patients with ACHD in combination with DM2 (Group II) and 15 practically healthy subjects (control group). The average age of the patients is 64.2±10.01 years, the number of men is 30 (50 %), and women – 30 (50 %). Patients were diagnosed with hemostatic parameters in venous blood.

Results. With a general similarity of changes in the anticoagulant system in both groups, attention was drawn to the significant exacerbation of antithrombin activity in patients in group II, which was accompanied by oppression of the PtC system. Thus, the level of PtC did not undergo significant changes. The indicator of Internal Medicine No. 1, Bogomolets National Medical University, Tarasa Shevchenko blvd., 13, Kyiv, Ukraine, 01601, Medical center “Ok/Clinic+” of International Institute of Clinical Researches LLC, Kharkivske highway, 121, Kyiv, Ukraine, 02091

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100 patients with IHD were included

Aim:

AND VESSEL CONDITION IN PATIENTS WITH

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2 diabetes) in combination with ischemic heart disease (IHD).

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Materials and methods:

COHORT PROSPECTIVE STUDY OF THE HEART AND VESSEL CONDITION IN PATIENTS WITH ISCHEMIC HEART DISEASE COMBINED WITH TYPE 2 DIABETES

p. 8-14

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The article is devoted to the evaluation of peculiarities of cardiac hemodynamics in patients with type 2 diabetes mellitus (type 2 diabetes) in combination with ischemic heart disease (IHD). The main parameters of the function of the heart and structural and functional changes of the common carotid artery (CCA), features of carbohydrate and lipid metabolism have been studied.

Aim: To evaluate the peculiarities of cardiac hemodynamics in patients with type 2 diabetes in combination with IHD and to find correlations with other cardiovascular risk factors in these patients.

Materials and methods: 100 patients with IHD were included in the study: patients with type 2 diabetes in combination with coronary heart disease, stable angina pectoris (n=60) – 1 group, 2 groups – patients with coronary heart disease: stable angina pectoris H-III FC without violations of carbohydrate metabolism (n=40). In the study of patients, the analysis of complaints, cardio-

diologic anamnesis, vascular risk factors, objective research, clinical and laboratory and clinical and instrumental research methods were performed, which included ECG, Holter monitoring of ECG, ECHO-CG, and vegetative ECG tests.

Results: On the basis of the conducted studies we revealed more severe violations of the diastolic function of the left ventricle, increased volumetric parameters of the heart, thickening of the intima-media complex in patients with coronary heart disease on the background of type 2 diabetes. According to the results of vegetative tests, 71.7 % of patients in group 1 revealed signs of diabetic autonomic cardiac neuropathy (DANS). Episodes of painless myocardial ischemia (BBIM) in patients in group 1 were twice as likely to occur in group 2 patients (45% of the total number of patients with diabetes mellitus) than in patients without type 2 diabetes (20 % of the total number of patients without diabetes type 2).

Conclusions: Significant violations of lipid metabolism, significant violations of autonomic innervation, including the sympathetic nervous system, and longer duration of type 2 diabetes (13.2±6.23) years were characteristic for patients with DANS in combination with BBIM. In patients with type 2 diabetes with DANS signs, an increase in the diameter of the CCA and the thickness of the intima-media complex was observed, indicating a more pronounced atherosclerotic vascular trauma in the central nervous system, and is an independent predictor of acute cardiovascular and cerebrovascular events. The presence of type 2 diabetes in patients with coronary heart disease accelerates the progression of LV remodelling and enhances myocardial dysfunction of the lungs, which is also one of the explanations for the higher risk of cardiac events in patients with coronary artery disease of the concomitant type 2 diabetes. It is advisable for all patients with type 2 diabetes to conduct an ultrasound examination of the heart with an estimate of intima-media thickness, as well as daily ECG monitoring for the early detection of atherosclerosis, episodes of BBIM, and timely treatment.

Keywords: diabetes mellitus type 2, ischemic heart disease, intima-media thickness

References


While analyzing the causes supposed to be important for disease prognosis and to impact on the patient’s survival of malignant thyroid tumors, the researches examine many factors. The aim of the study was to determine the indices of cumulative patients survival with differentiated thyroid carcinoma that belong to different histological types depending on biological properties of neoplasm and some clinical factors.

Materials and methods: Retrospective study of the cohort of patients after surgical intervention. The information of patients (age and sex, histological type, size and categories of carcinomas (TNM), their invasive properties, the presence of multifocal growth), as well as the clinical characteristics of the disease (stage, volume of surgical intervention and radioiodine treatment, risk of relapse group, number of points in the system MACIS) was analysed.

Results: In cases of papillary or follicular thyroid carcinoma the analyzed factors are important for further prognosis. The most essential factor for papillary carcinoma is the tumor size, which associated with other ones – metastasizing, multifocal growth, intra- and extra-thyroid invasion, relapse development. In patients below 45, which were operated because of cancer, without extra-thyroid tumor spreading and metastases, the favorable disease prognosis does not depend on the neoplasm type. Under other circumstances the impact of carcinoma histological type (for follicular carcinoma versus papillary ones) is more important, and in some cases – for men, for patients above 60, patients with tumors above 40 mm, for multifocal neoplasm with intra- and especially extra-thyroid invasion, for cases of distant metastases, thyroidectomy with lymph nodes dissection, with relapses the histological tumor type, is extremely important.

Conclusion: The obtained results confirm the conclusion that histological subtype of differentiated thyroid carcinoma, tumor size, age and patient gender are the most predictable of diseases persistence/disease relapse or patients mortality.

Keywords: papillary thyroid carcinoma (PTC), follicular thyroid carcinoma (FTC), prognostic factors, MACIS

References


The course of seizures in patient with supratentorial brain meningiomas (cohort retrospective study)

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Meningioma is the most common brain tumour with a favourable prognosis for a long life. Often epileptic seizures are the main clinical manifestation of meningiomas. However, surgical treatment does not always deprive patients of attacks, and vice versa, some attacks after surgery arise for the first time. Investigating the factors that influence the course of epileptic seizures will optimize treatment tactics.

Aim: Identify the factors that affect the preservation or emergence of epileptic seizures in patients operated for supratentorial meningiomas of the brain with a view to further personalized correction of anticonvulsants therapies.

Materials and methods: A retrospective analysis of the course of the disease was performed in 242 patients with totally removed supratentorial meningioma of the brain. The remote results of the disease in 176 people were evaluated. The average duration of observation was 37.0 months (12–111).

Results: In 55 (75.3±5.0%) out of 73 patients who had a seizures before surgical treatment, they disappeared in the distant period. Of the 103 patients without trial before surgery, they subsequently arose in 9 people (8.7±2.8%). Seizures were preserved in 8 (32.0±9.5%) out of 25 men and 10 (20.8±5.9%) out of 48 women. In 6 (50.0±15.1%) of 12 patients with localization of meningiomas in the left parietal lobe epileptic seizures were preserved, this localization was significantly more frequent in the group of patients with persistent seizures after surgery, p<0.05. The average duration of the disease before surgery is significantly higher in patients who did not seize free after intervention – 41.3 and 14.3 months respectively. Among those who had a history of seizures less than year, 40 (90.9±4.3%) of 44 patients were seizure free, and in those who were ill more than a year in 13 (56.5±10.6%) out of 23 cases. Among patients who had more than 10 attacks before intervention, after surgery they returned in 60.0±13.1% of cases, whereas among patients with less than 10 seizures before surgery, recidivism was only in 15.5±4.3% of patients. In the group of patients with persistent seizures after surgery, patients with more than 10 seizures in history were significantly more likely to suffer, p<0.01.

Conclusions: Total removal of meningiomas can make about ¾ patients seizure free. Localization of the tumour in the left parietal area is associated with a greater likelihood of preservation of epilepsy after surgery. The longer patient has the illness and the more seizures he has, the greater the probability of convulsions after surgical treatment.

Keywords: Meningioma, epilepsy, neuro-oncology, brain membranes, neurosurgery

References


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EFFECT OF EFFICIENCY IN TREATMENT SOCIAL AND PSYCHOLOGICAL FACTORS LIFE IN CHILDREN WITH EPILEPSY (cohort retrospective study)  

p. 30-35

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An important task of modern pediatric neurology is to increase the effectiveness of treatment of epilepsy in children. Traditional criteria for assessing the effectiveness of treatment, based on the indicators of laboratory and instrumental studies, reflect only the biological component of the picture of the disease and it is necessary to apply a criterion for assessing the state of other basic functions of the child.

The purpose. To identify the most significant social and psychological problems and aspects of the lives of children and adolescents with epilepsy, depending on the effectiveness of treatment (children with controlled and uncontrolled attacks) from the point of view of patients, their parents and health care professionals, and raising awareness of the sub-these issues related to this state to improve the quality of care for this group of patients to lead a better life.

Materials and methods. Surveys on social, psycho-emotional factors of life of children with epilepsy with controlled and uncontrolled attacks were conducted during 1 year with the help of questionnaires for 3 groups of respondents: children and adolescents from 12 to 18 years old, patients with epilepsy, their parents and the medical staff who are in contact with children with epilepsy in their work, the statistical processing of the received data is carried out.

Results. The study showed the main factors influencing the lives of children with epilepsy from the point of view of patients themselves, their parents and health professionals. These are social (the opportunity to attend school, communicate with peers, get education and employment in the future) and psycho-emotional (fear of their illness, its concealment from others, difficulty in learning) factors.

Conclusions. Most children with uncontrolled attacks receive home-schooling, miss 25.37±2.17 days of schooling, have problems communicating with new people, friends, less self-confident. More than a third of the respondents were informed about problems with memory, concentration and difficulties with math. A common problem for children with epilepsy and their parents is the fear of the future: the opportunity to get education and employment. Parents are concerned about further independent life. For children with uncontrolled attacks, their parents and health workers, the top priority is the effectiveness of treatment — overcoming attacks and the ability to lead an active social life. The complication between patients, their parents and doctors is higher in a group of children with controlled attacks.

Keywords: epilepsy, children, social and psychological factors, problems and aspects of life

References


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ANALYSIS OF THE FUNCTIONAL STATE OF RED BLOOD CELLS IN PATIENTS WITH SURGICAL PATHOLOGY OF THE AORTA AFTER SURGICAL INTERVENTION USING CARDIOPULMONARY BYPASS (cogorant prospective research)

p. 35-39

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The aim is to analyse the functional state of red blood cells in patients with surgical pathology of the aorta after surgical intervention using cardiopulmonary bypass.

Materials and Methods. 118 patients with surgical aortic pathology (SAP) were examined. Patients were divided into 2 groups. Group I included 46 patients who were additionally prescribed a solution of meglumin sodium succinate (reamberin), group II included 46 patients who were additionally assigned a solution of D-fructose-1,6-diphosphate sodium hydrate (esophosphine). Erythrocyte indices were analyzed: MCV (mean erythrocyte volume), MCH (mean hemoglobin in erythrocyte), MCHC (mean hemoglobin concentration in erythrocyte mass) and RDW (erythrocyte mean volume ratio).

Result. When analyzing the dynamics of the indicator of the width of the distribution of erythrocytes by volume (coefficient of the average volume of the erythrocyte) in the blood of patients with groups K, I and II, no significant differences were found between the groups. Despite the absence of statistically significant differences in the RDW index between the groups on a daily basis and in comparison with the starting values, nevertheless, in patients of group II, the recovery of its numbers was faster compared to others. Considering that patients of group II differed in prescribing an additional substance to the main treatment protocol - D-fructose-1,6-diaphosphate sodium hydrate salt - its pharmacodynamic effect can be considered positive for the erythrocyte membrane elasticity, their elasticity and hemolytic resistance.

Conclusions. It can be argued that the mere fact of anesthesia support using cardiopulmonary bypass negatively affects the state of erythrocyte indices: MCV, MCH, MCHC, RDW. The study provides a vector for the appointment during surgery additional pharmacological substances that would have a positive impact on these indicators.

Keywords: functional state of erythrocytes, surgical aortic pathology, artificial blood circulation

References


The use of braces for the correction of single tooth position in some cases seems to be impractical, since it may cause a violation in the position of the adjacent teeth, which are used as a support for such correction. An alternative way to move of single tooth into the normal position is use of device with permanent Nd-Fe-B magnets. This allows to localize the force action and achieve the desired aesthetic and functional result with fewer side effects and also reduce the cost of treatment.

The aim of present work was development of methods and normalization of position of upper jaw canine by using the device with permanent Nd-Fe-B magnets.

Materials and methods. To move the tooth, the permanent Nd-Fe-B magnets of size 5×5×2 mm were used. An anti-corrosion ZrO$_2$ coating was applied to the surface of the magnets. One of them was installed in a plastic devise, and the second one was fixed on the tooth using photopolymer material. The magnitude of acting force was determined using the experimentally derived dependence of the force of attraction or repulsion of magnets on the distance between them. Additional control of the interaction forces between the magnets, both at the beginning of treatment and at individual stages, was carried out using a teslameter and recalculation tables.

Results. The article provides a description of the technique and stages of manufacturing of device with magnets, as well as the procedure for attaching the magnet to the tooth surface. There was presented a clinical case of moving an abnormally located canine using a device with permanent Nd-Fe-B magnets. As a result of orthodontic treatment performed using a permanent magnet device, a vestibular displacement of the tooth 23 was performed in order to achieve normal overlap in the transverse plane. The proposed method of orthodontic treatment allowed in a short time to normalize the position of tooth 23 without side effects for the remaining teeth.

Conclusions. On the base of treatment it was proved the possibility of moving individual tooth using the device with Nd-Fe-B permanent magnets without the occurrence of side effects for supporting teeth, which allows expanding the range of traditional bite correction methods.

Keywords: malocclusions, canine dystopia, teeth position correction, Nd-Fe-B magnets, devices with magnets

References


