

A STUDY IN CHINOLINE AMERIDIN EFFECT ON LYMPH SYSTEM COAGULATION ACTIVITY UNDER CARDIAC INFARCTION

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Violation of lymph outflow from cardiac muscle damage area leads to development of interstitial edema, aggravates microcirculation disturbance in coronary vessel obliteration area.

The object of work is to study the effect of chinoline ameridin (derivative of carboxylic acids) on lymph circulation wrapping activity and lymph drainage function of cardiac muscle under acute cardiac infarction.

Research material and methods Experiments were performed on 35 rats with weight of 180 – 200 g. In 5 rats the lymph coagulation condition and lymph outflow rate (lymphorrhagic syndrome) was studied in intact condition.

In the rest of animals acute cardiac infarction was imitated by tying upper third of anterior interventricular artery. The dynamics of acute cardiac infarction progress was monitored by ECG registration and determination of creatine phosphokinase (CPK) in blood serum by spectrophotometry using Chemaol standard reagent set. The blood was taken from auricular limbic vein. ECG was registered in intact condition and within 25 days, CPK at the beginning of experiment as well as within 6 days after imitation of infarction.

Results and discussion In animals of Group 2 after administration of ameridin substance the course of infarction was more favorable. Alterations of lymph coagulation were marked by reduction of heparin tolerance by 58%, more than 1.5 times decrease of prothrombin index as compared with control group, substantial increase of heparins and thrombin time (218 and 221% respectively), fibrinogen concentration was reduced 2.5 times. Lymph outflow velocity increased more than 4 times as compared with controls (0.132 ± 0.016 mL / min) which was indicative of intensified lymph drainage, thus, better removal of cardiac metabolism toxic products.

Conclusion It must be noted that within the following periods of study heparin and thrombin time values were higher than initial ones, whereas prothrombin index and fibrinogen concentration remained reduced up to the end of observation. Consequently, we may state that chinoline ameridin administration has an expressed hypocoagulation effect and stimulated lymph anti-coagulation activity.

Chinoline ameridin showed an expressed hypocoagulation effect in experiment as well as assisted in acceleration of cardiac lymph draining function.

CYTOGENETIC AND MOLECULAR DIAGNOSTIC OF MARRIED COUPLES WITH DISORDERS OF REPRODUCTIVE FUNCTION

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Introduction. In the modern world, the problem of infertility is considered one of the most important medical and social problems. The relevance of diagnosis, treatment and prevention of infertile marriage is associated with a significant prevalence of this pathology in Ukraine and a tendency to increase throughout the world. According to dates of WHO, 15% of married couples (60-80 million) in the world are infertile; pregnancy occurs in natural conditions, but ends with a born dead in 10 % of cases, and in 10-25 % of couples experiencing secondary infertility.

Aim. To explore the possibility and effectiveness of cytogenetic – molecular research methods for the diagnosis of chromosomal pathologies in couples with disorders of reproductive function.

Materials and methods. Cytogenetic, genetic, statistic and polymerase chain reaction method in real time.

Results and discussion. In the structure of a barren marriage, primary infertility (up to 77 %) with a frequency of 1 infertile marriage is prevalent on the 8 studied pairs. In combined infertility among female factors, the tubal-peritoneal factor (up to 43 %) is in the first place, in the second place endocrine infertility (up to 30 %), in the third – endometriosis (up to 25%).

The frequency of genetic disorders in the general group (2360 people) was 7,89% (186 people), and with additional molecular study of Y-chromosome in men, it was found that 11,2% of all people had 1 or more deletions in the chromosome Y.

In the course of research, the most frequent was the pericentric inversion of the 9th chromosome 46, XX / 46, and XY. According to our data, this anomaly was 15 cases and is consistent with the data of other authors. This distributed structural balanced chromosomal aberration is considered a paraphysiological variant of normal karyotype, which does not lead to any phenotypic manifestations.

Conclusions. The obtained results of the research confirm that the cytogenetic examination of the spouses is an integral part of the medical genetic counseling of families with a burdened reproductive history, which allows to determine the chromosomal etiology of infertility and to choose the best practice of conducting a pair for the birth of healthy offspring. Diagnosis of genetic disorders is necessary in order to determine the cause of infertility; determine the cause of the interruption of pregnancy etc.

LEVELS OF C-REACTIVE PROTEIN IN PATIENTS WITH CORONARY HEART DISEASE WITHIN THE HYPOTHYROIDISM.

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Introduction. C-reactive protein (CRP) as a marker of immune activation plays an important role in the pathogenesis of atherosclerosis and atherothrombosis and is considered an important pathogenetic factor in systemic and vascular inflammation. The significance of this marker for assessing the course of coronary heart disease (CHD) against the background of the concomitant hypothyroidism of the thyroid gland (TG) has almost not been studied.

Aim. The purpose of the work is to study the levels of CRP in patients with coronary heart disease in the context of hypothyroidism.

Materials and methods. We examined 43 patients with stable angina pectoris II-III FK, in 22 of which CHD proceeded with concomitant hypothyroidism (HT), 2 groups – 21 patients with coronary artery without structural-functional changes of the thyroid gland. The age of the patients was from 52 to 75 years. All patients were on inpatient treatment in the departments of the therapeutic profile of the 2nd City Clinical Hospital in the city of Kharkiv. The control group consisted of 15 practically healthy persons of the same age. All patients performed a comprehensive clinical and laboratory examination.

Diagnosis of hypothyroidism was established in accordance with the recommendations of the European Association of Thyroidal Detection. The determination of the content of blood serum biomarkers was performed on the LabAnalyt-2900 Plus (PRC) immuno-enzyme analyzer.

Results and discussion. Initial examination showed that patients with coronary artery disease with concomitant hypothyroidism had a significant reduction in the function of the thyroid gland – the average level of thyroid stimulating hormone (TTG) $14.05 \pm 3.40 \mu\text{M} / \text{ml}$; the mean free thyroxine level (T4 -free) was $11.65 \pm 0.52 \text{ pMol} / \text{L}$, and in patients with group 2 the mean TTG level was $2.32 \pm 0.31 \mu\text{M} / \text{L}$; average level T4- free is $17.95 \pm 0.55 \text{ pMoles} / \text{L}$. We have also established a significantly greater activity of immune inflammation in patients with coronary artery disease with hypothyroidism compared with patients with coronary heart disease without thyroid disease: in group 1 the level of CRP was 2.6 times higher than that of patients in the 2nd group.

Conclusions. The obtained data suggest that hypothyroidism is capable of potentially increasing the risk of complications of atherosclerosis and progression of coronary heart disease, also due to stimulation of systemic inflammation.