

THE EFFECT OF POLYDICHLORIDE ON THE COAGULATION ACTIVITY OF THE LYMPHATIC SYSTEM IN CARDIAC INFARCTION IN PATIENTS WITH TYPE 2 DIABETES

Marchenko E. O., Karabut L. V.

Scientific supervisor: prof. Berezniakova M. E.
National University of Pharmacy, Kharkiv, Ukraine
klinlab@nuph.edu.ua

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

The **aim** of work is to study the effect of polidichlozine (dinoline derivative of carboxylic acids) on lymph circulation wrapping activity and lymph drainage function of cardiac muscle under acute cardiac infarction on the background of diabetes.

Materials and methods Experiments were performed on 25 rats with weight of 180–200 g. In 5 rats the lymph coagulation condition and lymph outflow rate (lymphorragic 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 9 days after imitation of infarction.

Results and discussion. In animals of Group 2 after administration of polidichlozine substance the course of infarction was more favorable. Alterations of lymph coagulation were marked by reduction of heparin tolerance by 71%, more than 1.8 times decrease of prothrombin index as compared with control group, substantial increase of heparins and thrombin time (219 and 235% respectively), fibrinogen concentration was reduced 1.5 times. Lymph outflow velocity increased more than 3 times as compared with controls ($0.127 \pm 0.021 \text{ mL / min}$) 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 polidichlozine administration has an expressed hypocoagulation effect and stimulated lymph anti-coagulation activity. Polidichlozine showed an expressed hypocoagulation effect in experiment as well as assisted in acceleration of cardiac lymph draining function on the background of diabetes.

CHANGES IN HORMONAL STATUS IN WOMEN WITH A PATHOLOGICAL MENOPAUSE

Palamarchuk O., Inzhevato V.

National University of Pharmacy, Kharkiv, Ukraine
palamarchuk_xena@ukr.net

Introduction. In connection with the increase in the life expectancy of women, the growth of their social activity, the problem of pathological climax has not only medical but also social significance. Climacteric syndrome (CS) is a complex of symptoms that complicates the natural course of climacteric syndrome, and is neuropsychiatric, vasomotor, urogenital, hormonal and metabolic disorders.

The **aim** of the study. Find out what changes are hormonal in women with a pathological menopause.

Materials and methods. 50 women who were in the menopausal period were screened. Of these, 30 (60%) of women with a pathological menopause formed the main group; 20 (40%) women with a physiological menopause - a comparison group. Each group was divided into subgroups, depending on whether they were in pre- or postmenopausal period. All women had a clinical and laboratory examination. Complaints, anamnesis, clinical tests of blood, urine, coagulogram, blood sugar and urine contents, RW, ultrasound examination of internal genital organs, ECG were performed). In addition, the concentrations of hormones: gonadotropic (FSH, LH), TTG, steroid (estradiol, progesterone, cortisol), as well as β -endorphin in blood serum were determined. The concentration of FSH, LH, estradiol, and progesterone in serum was determined by the radioimmune method. In assessing the gravity of the CS, the scale of S. Heifetz (1981),

based on the discrete method of structural analysis by M. Amosov (1965), was used. The processing of the obtained results was carried out using standard computer software of statistical processing.

Results and discussion. In the analysis of clinical material, it was noted that CS in 74% of cases develops in women aged 46 - 53 years, with a duration of menopause 1 to 4 years (34%). In the menopause, adaptive mechanisms of the organism are activated, in connection with which the CS can be considered as a disease of adaptation. The ratio of LH/FSH in all patients with pathological menopause was less than 0.7. The level of TTH in all patients with CS was 1.5-2 times higher than that of healthy women ($p < 0.05$). At high concentration of cortisol (3.2 – 3.8 times higher than in women with physiological menopause) and low β -endorphine (in 2.9 – 3.2 times lower than average physiological menopause) ($p < 0.05$). In the inverse ratio: on the background of low levels of cortisol (1.7-2.1 times lower than the average physiological menopause), high levels of β -endorphin were recorded (1.3-1.5 times higher than that of healthy women of the corresponding age) ($p < 0.05$). Hypercorticism against the background of lowering β -endorphin levels indicates the maximum "tension" of protective and adaptive systems. Low concentrations of cortisol against the background of high β -endorphine index illustrate the "disruption" of adaptation, which, according to our observations, coincided with a more pronounced climacteric disorder.

Conclusions. The performed studies of the hormonal status of women showed that the patients of all clinical groups were in the hypergonadotropic phase of the perimenopausal period: elevated levels of gonadotropic hormones (FSH, LH) with a decrease in the concentration of steroid hormones (estradiol, progesterone). In the pathological menopause, two variants of manifestation of adaptation are observed. With increased content of cortisol (3.2 – 3.8 times relative to average physiological menopause), a decrease in β -endorphin (2.9 – 3.2 times) (variant I) is observed. At low concentrations of cortisol (1.7 – 2.1 times), high content of β -endorphin (in 1.3-1.5 times) is recorded (variant II). Such interrelation may indicate a high intensity, and in some cases, "disruptions" of adaptation processes in patients suffering from CS.

CLINICAL-DIAGNOSTIC STUDY OF PYLEONEPHRITIS IN CHILDREN

Simenichenko A. O., Ostapets M. O.

Scientific supervisor: assoc. prof. Dolzhykova O. V.

National University of Pharmacy, Kharkiv, Ukraine

klinlab@nuph.edu.ua

Introduction. According to the Ministry of Health of Ukraine, urinary tract infections are the most common infections in children under 2 years of age and occupy the second or third place, conceding only to infections of the respiratory tract and the gastrointestinal tract. Over the past 5 years, the prevalence of nephrology has increased in Ukraine from 46 to 58 per 1,000 children. According to statistical data among inflammatory diseases of the kidneys caused by microorganisms, in childhood pyelonephritis is most common. It accounts for 0.5 to 3.5% of children of all ages. Among all pathologies of the urinary system, in 70% of cases, according to clinical complaints, pyelonephritis is detected. By the first year of life, both girls and boys are ill with an almost identical frequency (3.7% vs. 2%), however, at an older age, girls begin to become sick 7 times more often. Despite the numerous Ukrainian and foreign articles of scientists devoted to the study of methods for diagnosis, monitoring and prediction of the functional state of kidneys in children with pyelonephritis, there is practically no work in which the differential approach to the diagnosis of this nephropathy is studied in children of different age groups. The foregoing points to the relevance and medical and social significance of this work.

Aim. To study the features of the course of pyelonephritis in children of different age groups and to identify the most significant clinical and laboratory indicators for the diagnosis, monitoring and prediction of this nephropathy in all ages children.

Materials and methods. The subject of the study was group of different age children suffering from pyelonephritis (total of 80 sick children and 20 healthy children who served as a control group). The basic methods of research are used in studying the parameters of the blood system, hemostasis, urine. To determine their use of conventional methods.

Results and discussion. In the study of clinical signs, it is found that all clinical symptoms can be combined into 5 main syndromes: toxic, gastrointestinal syndrome, urological pain syndrome, dysuric syndrome, urinary syndrome. In addition, the clinical signs of pyelonephritis differed in groups of different