DISTURBANCES OF LIPID PEROXIDATION (LP), AND THEIR CORRECTION BY EMOXYPINE IN EMERGENT STATES

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State of LP processes and of the antioxidant system (AOS) and their control by antioxidant emoxipine (EX) of the oxypyridine class in experiment and clinic were studied in acute blood loss (ABL) and acute transitional coronary insufficiency (ATCI). ABL and ATCI were reproduced in Wistar rats and dogs; the clinical studies were carried in gastroduodenal ulcer haemorrhage (ABL) and in unstable angina pectoris (ATCI) patients. ABL and ATCI resulted in LP products increase; AOS components decreased in heart, liver, and serum of the animals and in serum of the patients. The LP activation degree in the tested organs of the animals and in patients' serum was different and depended on the periods of the study. EX introduction in the animals resulted in LP processes' inhibition and AOS components' normalization. in the studied organs and tissues. In the ABL and ATCI patients, a growth of LP and a drop of AOS in blood serum were recorded. EX introduction in the ATCI patients in a dose-dependent manner corrected LP and AOS, improving the disease clinical course. Thus, in both ABL, and ATCI, an antioxidant therapy is essential in clinics.

CORRECTION OF LIPID PEROXIDATION IN CHOLERA ENDOTOXICOSIS

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The use of the complex of preparations: β-andrenomymetic- fenoterol, Ca^{2+}-channels blocker- isoptin, as well as dofamin and hemodes in the dynamics of intoxication produced by administration of endotoxin in the dose of DL_{25} to white rats was accompanied by correction of some indices of activity in the processes of lipid peroxidation and antioxidant system: the level of malonic dialdehyde in blood plasma and erythrocytes, as well as blood superoxide dismutase activity returned to norm. Meanwhile, blood catalase activity remained significantly below norm indices, and the number of diene conjugates exceeded control indices just as in the group of sacrificed animals without medicinal correction.

SERUM VITAMIN E LEVELS IN CHILDREN WITH NEPHROTIC SYNDROME

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In spite of the fact that disturbances of lipid metabolism in nephrotic syndrome have been known for many years, up to date a few reports have been published about lipid soluble vitamins. Therefore, the aim of this study was to evaluate serum vitamin E levels in pediatric patient with steroid-sensitive nephrotic syndrome (serum albumin <2.5 g/dL, proteinuria >40 mg/m^2/h). We also determined serum total cholesterol (TC), triglyceride (TG), high density lipoprotein cholesterol (HDL-C) and low density lipoprotein cholesterol (LDL-C) levels. Measurements were done spectrophotometrically. There were 19 patient and 19 controls, age range 2-16 years (mean 7.2±0.9 years) and 1.5-15 years (10±0.9 years), respectively. Serum vitamin E, TC, TG and LDL-C levels were found to be significantly higher than controls, whereas HDL-C levels significantly lower than those of healthy controls. In conclusion, related to high levels of TC and TG, vitamin E values might tend to elevate in children with steroid-sensitive nephrotic syndrome.

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THE EFFECT OF COENZYME Q10 (UBIQUINON) ON THE GENERATION OF THE REACTIVE OXYGEN SPECIES BY PHAGOCYTES AND LIPID PEROXYDATION IN PATIENTS WITH CORONARY HEART DISEASE - STABLE ANGINA PECTORIS

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We investigated the blood generation of the reactive oxygen species by phagocytes (ROSF) using the luminol-dependent chemoluminescent method, lipid peroxidation (LP) by the plasma malondialdehyde (MDA) concentration (J.Douset method) and plasma resistance to the initiation of the hydrogen peroxide free radical oxidation, i.e. oxidative stress (HPR) in 60 angina pectoris patients (II-III functional class (FC)) and 35 blood-donors.

Two month administration of the antioxidant coenzyme Q10 150 mg daily after placebo course as an addition to conventional antianginal therapy led to reliable decrease of the ROSF by 37.0% and 40.0%, MDA concentration by 12.0% and 26.0% to the HPR increase by 26.1% and 31.1% in II and III FC patients respectively ($p<0.05$, $p<0.001$). This changes of ROSF and LP were accompanied by positive changes of clinical parameters.

Obtained data proved pathogenically caused inclusion of the antioxidants (particularly coenzyme Q10) in complex therapy of stable angina pectoris.