

Міністерство освіти та науки, молоді та спорту України
Міністерство охорони здоров'я
Сумський державний університет
Медичний інституту



АКТУАЛЬНІ ПИТАННЯ ТЕОРЕТИЧНОЇ ТА ПРАКТИЧНОЇ МЕДИЦИНИ

Topical Issues of Clinical and Theoretical
Medicine

Збірник тез доповідей
III Міжнародної науково-практичної конференції
Студентів та молодих вчених
(Суми, 23-24 квітня 2015 року)

Суми
Сумський державний університет
2015

celebrated European surgeons. It was Pirogov who was called in to remove the bullet from the famous Italian revolutionary Garibaldi. Pirogov's creative work formed an epoch in the development of medicine and anatomy. N. I. Pirogov organized the Anatomical Institute in the Medico-Surgical Academy and invited W. L. Gruber, the Prague anatomist, to work with him. After Pirogov's death his body was embalmed by Vychodsev, and sixty years later re-embalmed.

CHRONOPHARMACOLOGICAL PECULIARITIES OF ANTIOXIDANTS ACTION IN TOXIC LIVER DAMAGE

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Treatment of toxic liver damage is one of the actual problems of hepatology. Chlorine-organic compounds have the important place between xenobiotics causing pathological liver changes of chemical etiology. Carbone tetrachloride (CCl₄) is among them. This substance is widely used in different industries and characterized by well-known danger to humans. We have previously demonstrated the significantly high efficacy of antioxidants in toxic influence of CCl₄.

An aim of this study was the investigation of chronopharmacological peculiarities of vitamin E and sodium selenite in toxic liver damage caused by CCl₄.

It was found, that hepatotoxicity of CCl₄ is manifested in maximal degree during spring and summer. In these seasons, lipid peroxidation and low thiol-disulfide ratio are more expressive than in autumn and winter. It is necessary to notice, that the maximal increase of lipid peroxidation level under CCl₄ influence during spring and summer and minimal one during autumn and winter corresponds with maximal and minimal activity of aminotransferases. Efficacy of sodium selenite in treatment of CCl₄-induced liver damage is higher during autumn and winter. Vice versa, hepatoprotective effect of vitamin E is higher during spring and summer. Sodium selenite prevents hepatotoxicity of CCl₄ in autumn-winter season. Combination of sodium selenite with vitamin E exhibits more expressive effect, than separate agents. This combination prevents toxic action of CCl₄ in autumn, winter, spring, and in less degree – in summer. It is due to higher toxicity of poison in summer period.

Obviously, unequal efficacy of vitamin E and sodium selenite in different seasons is result of seasonal pharmacokinetic peculiarities of vitamin E, because selenium concentration in blood and internal organs of rats is independent from seasons. Intensity of free-radical processes (which markedly increased in summer) has significant influence upon distribution of vitamin E in organism, including its accumulation in liver in the hot season.

CHANGES OF THE HEART AT HYPOOSMOLAR OVERHYDRATION

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Introduction. Nearly all the major systems of our body depend on water to work properly. Drinking plenty of water throughout the day aids in regulating body temperature, preventing constipation, flushing waste products out of the body, and many other important functions. However, overhydration—or drinking too much water—is also a potentially deadly condition, one that can throw off the balance between water and sodium in our blood. Hyponatremia is an electrolyte disturbance characterized by sodium concentration in the plasma below 135 mmol/L. At lower levels, overhydration (water intoxication), an urgently dangerous condition, may result in this situation. Too little sodium in our body prevents our nerves from communicating properly with our muscle tissue, leading to muscle weakness, as well as spasms and cramps. Hyponatremia also affects our heart muscle, increasing our heart rate.