Міністерство освіти та науки України Сумський державний університет Медичний інституту



## АКТУАЛЬНІ ПИТАННЯ ТЕРЕТИЧНОЇ ТА ПРАКТИЧНОЇ МЕДИЦИНИ

# Topical Issues of Clinical and Theoretical Medicine

### Збірник тез доповідей

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#### TOM 2

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При патологоанатомическом исследовании биоптатов: печень – дискомплексация балочной структуры печени, гепатоциты в состоянии крупнокапельной жировой дистрофии с разрывом цитолеммы и цитолизом. Почки - в части эпителиоцитов канальцев жировая дистофия – интрацеллюлярно внутри цитоплазмы жировые вакуоли. Головной мозг явления выраженного периваскулярного, перицелюллярного и перинуклеарного отека. Заключение: особенность данного клинического случая заключается в сочетании подкорково-мозжечковой дегенерации на фоне нарушения обмена жирных кислот с дальнейшим развитием Рейе-подобного синдрома.

#### EFFECTS OF EXPERIMENTAL HYPOXIA ON ZINC BALANCE IN THE BRAIN TISSUE OF RATS

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Micronutrient disbalance is one of the mechanisms of damage of membranes. The role of microelements and especially ultramicroelements in metabolic adaptation of newborns on the background of hypoxia is staying unknown.

Research purpose: to research zinc cerebral tissue supply in case of experimental hypoxia with different degrees of complexity.

Microelement supply for zinc was studied as well as the lead level of cerebral tissue in experimental hypoxia conditions. Microelement supply was investigated on 44 laboratory rodents on their first and seventh days.

Zinc content on the first day of live is 158,54±0,66 mkg/g, but in the end of first week it is  $109,07\pm0,92 \text{ mkg/g}.$ 

The weak and mild-powerful interactions were distinguished between element content in brain and liver (r= -0,23), heart (r=0,37) and kidneys (r=0,21). In a week these interactions were fainted away and it might indicate zinc content elaboration in organs.

The light hypoxia affect caused zinc content reducing in newborn brains in 16,43%  $(p \le 0.05)$ . The seven-days old animals had its lowing for more 16,43%  $(p \le 0.05)$ .

The complicated hypoxia level extended changes in elementary compound mostly in newborn animals. In comparison to the light hypoxia affect zinc content in cerebral tissues was reducing in 43,71% (p≤0,05) the first day, and at the same time the seven-day old animals had its reducing in 3,89% ( $p \le 0.05$ ).

When newborn rats had hypoxia effect, it was noticed that converse correlation between brain and kidney zinc content was formed (r= -0,62) and heart (r= -0,41). In case of complicated hypoxia the positive mild-powerful correlation occurred between cerebral and heart tissues' zinc content (r=0,54).

That's why, hypoxia affect causes the new element content correlation formations in brain and as well as in other organs, this happens due to tissue excitability changes of pathological factor influence during the neonatal period.

By means of two-factor analysis of variance it is pointed out that hypoxia stage has a minimal influence on cerebral tissue zinc content (12,1%). The age factor efficiency is 69,8%. Otherwise, monitored factor combination has a lower effect just 17,4%.

#### THE USE OF HYPOALLERGENIC MIXTURES IN CHILDREN WITH SIGNS OF **ATOPY**

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Question feeding children with clinical manifestations of atopy at impossibility of breastfeeding from a scientific point of view remains controversial. Evaluate the clinical