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PROGRAMME AND ABSTRACTS

EFFECT OF SUPPLEMENTATION WITH TRIBASIC ZINC OR COPPER SALTS ON THE LIVER ANTIOXIDANT STATUS IN RATS WITH FASCIOSIS

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Recent studies indicate that fasciolosis leads to oxidative stress which is the causative agent in the initiation and progress of lipid peroxidation in the host. Many antioxidant defences depend on micronutrients (Cu, Zn, Mn, Se) or are micronutrients themselves.

The aim of our study was to assess the antioxidant status (vitamin C, A, E, zinc, copper, superoxide dismutase and catalase activity and malonildialdehyde content) of rat liver in the chronic stage of fasciolosis after supplementation with tribasic zinc or copper chloride [$\text{Cu}_2(\text{OH})_3\text{Cl}$ and $\text{Zn}_5(\text{OH})_3\text{Cl}$].

Levels of vitamins and trace elements as well as SOD-activity were reduced and CAT-activity increased in the infected livers. The application of $\text{Zn}_5(\text{OH})_3\text{Cl}$ elevated the concentration of vitamin E, C and A, and Zn, and the activity of SOD without affecting CAT-activity. The application of $\text{Cu}_2(\text{OH})_3\text{Cl}$ increased the concentration of Cu and vitamin E without affecting CAT and SOD-activity. Both salts reduced liver malonildialdehyde content. The effect of salts was better expressed on the antioxidant parameters in the infected animals than in the control ones.

Results indicate that the antioxidant imbalance was developed in the livers of rats infected with *F. hepatica*. The application of both basic salts improves the host's antioxidant defence system. It seems that $\text{Zn}_5(\text{OH})_3\text{Cl}$ is a more potent antioxidant than $\text{Cu}_2(\text{OH})_3\text{Cl}$ in the rats with fasciolosis. Food fortification with an adequate zinc and copper compound would be an economical strategy to prevent zinc and/or copper deficiency leading to increased oxidative stress in parasitoses.

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IN VITRO АКТИВНОСТ НА ОФЛОКСАЦИН