CHANGES IN THE CONTENT OF MOLECULES OF MIDDLE MASS IN ANIMALS IN CONDITIONS OF SERIOUS INJURY ON THE BACKGROUND OF POISONING BY SALTS OF COPPER AND ZINC

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SUMMARY. Trauma of various degree of severity is accompanied by severe endotoxicosis, which increases with the injury severity. Excessive ion exchange of copper and zinc also causes an increase in the level of molecules of middle mass. The severity of these moves grew against the background of injuries of moderate and severe degrees. Compared to animals without additional intoxication after an average grade injury, the content of both fractions of MSM was significantly greater only after 1 day of the post-traumatic period (p<0.05). After severe trauma, the content of both fractions of MSM was significantly greater only after 1 day of the post-traumatic period (p<0.05).

KEY WORDS: polytrauma; zinc and copper; molecules of middle mass; endogenous intoxication.

Materials and Methods. Experiments were performed on non-linear white male rats weighing 180–200 g. Chronic intoxication with copper and zinc sulfates was carried out according to the method of Zasekin (2001) by daily administration into the stomach through a probe of their solutions in a dose of 5 mg/kg1 in terms of metal once a day. After 14 days, in conditions of thiopental-sodium anesthesia (40 mg kg1 of body weight), animals simulated skeletal trauma of varying severity. The control group was animals that simulated skeletal trauma without poisoning heavy metal salts.

Results. An important element in the pathogenesis of traumatic illness is the development of endotoxicosis. In the bridge MMM254 in both experimental groups significantly increased to 3 days, which was proportional to the severity of the injury, followed by a decrease of up to 7 days.

Conclusions. Thus, an injury of varying degrees of severity is accompanied by severe endotoxicosis, which increases with the severity of the injury. At the same time there is a natural increase in the content of MMM of both fractions by the third day with the subsequent decrease to the seventh. Excessive intake of copper ions and zinc also causes an increase in the level of endotoxicosis, which was most noticeable after a trauma of moderate severity at all time of observation and after severe trauma after 1 day of post-traumatic period.

Discussion. The development of endotoxicosis is determined by the immobility of the organism under conditions of thiopental-sodium anesthesia, the animals were withdrawn from the experiment under conditions of thiopental-sodium anesthesia (60 mg kg1 – body weight) by total blood flow to the heart. To assess the level of endogenous intoxication in serum, the content of fractions of a molecule of average mass at a wavelength of 250 and 280 nm was determined.

Conclusion. Thus, an injury of varying degrees of severity is accompanied by severe endotoxicosis, which increases with the severity of the injury. At the same time there is a natural increase in the content of MMM of both fractions by the third day with the subsequent decrease to the seventh. Excessive intake of copper ions and zinc also causes an increase in the level of endotoxicosis, which was most noticeable after a trauma of moderate severity at all time of observation and after severe trauma after 1 day of post-traumatic period.
LITERATURE


REFERENCES


