EFFECT OF ORGANIC MICROELEMENTS IN LIPOSOMAL FORM ON FERTILIZING ABILITY AND THE LEVEL OF ANTIOXIDANT REACTIONS OF FEMALE RABBITS

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The purpose of this study was to investigate the effect of supplementation with organic zinc, manganese and chromium in the form of liposomal complex on the fertilizing ability and the level of antioxidant responses of female rabbits. Feeding of female rabbits with supplementation of organic forms of trace elements prior to insemination resulted in increase the numbers of corpora lutea, implantation and living fetuses compared to the control group. Moreover, there were the 4.4% and 1.7% decrease in pre- and post-implantation losses in animals receiving the organic microelements prior to insemination, respectively. The level of thiobarbituric-acid-reacting substances in ovary of experimental group was significantly higher (P ≤ 0.05) compare to the control group, while the level of lipid hydroperoxides in experimental group was decreased. In the uterus of rabbits after addition organic compound of trace elements significantly decreasing the thiobarbituric-acid-reacting substances level was by compare to the control animals (P ≤ 0.001). The level of the superoxide dismutase activity in uterus and ovary of female rabbits in the experimental group were significantly higher than in the control group (P ≤ 0.01). Our studies indicated that supplementation organic microelements in liposomal form to the basal diet for 2 weeks before insemination had a beneficial effect on the metabolism intensity and maintaining antioxidant-prooxidant balance in reproductive organs that improve fertilization and mbryo implantation.

Key words:. organic forms of trace elements, female rabbits, antioxidant reactions.

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maternal and cord blood in relation to birth weight and gestational age of the baby.


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