TREATMENT OF POSTPARTUM COWS WITH THE LOW INTENSITY LASER IRRADIATION AND ANTIBIOTICS

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Summary. The objective of the study was to compare the efficiency of laser therapy and antibiotics in the prophylaxis and treatment of endometritis in cows with regard to the Open Days Period, duration of treatment and the need for additional treatment; and to develop a scheme of prophylaxis of endometritis for postpartum period. The cows rectal temperature was indicated to have risen higher than >38.8°C on the second day after parturition, were selected for testing. Cows were subdivided into three groups and two subgroups. Experiment 1. The objective was to assess the effectiveness of antibiotic therapy alone. The first group was comprised of 95 fresh dairy cows which, for prophylaxis, received an intramuscular injection of 12 ml of EXCENEL RTU ® for three days, following the second day after parturition. Experiment 2. The objective was to assess the effectiveness of laser therapy alone. The second group was comprised of 25 cows, the sacroiliac area of which was irradiated for 10 days consecutively with low intensity laser device STP – 99, and which had not been given the antibiotic prophylaxis. The exposure to laser therapy amounted for three minutes per day. Experiment 3. The objective was to assess the effectiveness of combined laser and antibiotic therapy. The third group was comprised of 65 fresh dairy cows, which received an intramuscular injection of 12 ml of EXCENEL RTU® for three days, following the second day after parturition. The sacroiliac area of one sub-group (30 cows) was irradiated 10 times consecutively, once a day, with low intensity laser device STP – 99 and the other sub-group (35 cows) received two 10-day therapy sessions, with a 10 day break between them. For the control (fourth group) we selected 40 similar cows that received no antibiotic prophylaxis or laser irradiation, and were given 12 ml of intramuscular saline injection for three days consecutively. In comparison with intact cows, laser physiotherapy shortens the Open Days Period by 17.8 % ($p < 0.05$) and reduces the need for complementary treatment by 31.6 % ($p<0.05$). Laser physiotherapy in combination with cephalosporins is a more effective method of prophylaxis than therapy with cephalosporins alone (the need for endometritis treatment is 33.3 % lower ($p<0.05$) in comparison to controls, and the Open Days Period is shorter by 29.2 % ($p<0.05$). The optimal scope of laser therapy, economically and clinically, is one session per day (for 10 days consecutively, after parturition)

Keywords: cows, physiotherapy, antibiotics prophylaxis, postpartum period