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Rozprawa Doktorska

OCENA ZBILANSOWANEGO ZNIECZULENIA U PSÓW Z WYKORZYSTANIEM NISKICH DAWEK TILETAMINY I ZOLAZEPAMU PODAWANYCH W CIĄGŁYM WLEWIE DOŻYLNYM

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Kochanej Babci,

która nigdy nie przestała wierzyć.

Abstract

The study assessed a protocol of balanced anesthesia in dogs with the use of low doses of tiletamine and zolazepam administered by continuous intravenous infusion. In our study, 30 dogs were used, divided into two groups of 15 animals each (study group - TZ and control group - P). All of them were patients of the Department and Clinic of Surgery, Faculty of Veterinary Medicine, Wrocław University of Environmental and Life Sciences. In the TZ group, the combination of tiletamine – zolazepam was used for induction and maintenance of general anaesthesia in a bolus and continuous infusion, respectively. The results were compared to a standard protocol for general inhalation anesthesia using propofol induction and isoflurane maintenance. The animals of both groups underwent ovariohisterectomy or ovariectomy with or without laparoscopic gastropexy. In both groups, the patient's intubation time as well as cardiovascular and respiratory parameters, internal body temperature, and demand for anesthetic gases were recorded. The effect of the combination of TZ on the quality of patients' awakening was also assessed by analyzing the degree of sedation ("Sedation Assessment" scale) and the level of pain (CMPS-SF scale) in the post-anesthetic period.

The induction of general anesthesia with the use of the tiletamine – zolazepam combination was assessed as very good. The number of breaths was controlled by the anesthetist to maintain the carbon dioxide concentration in the exhaled air at the level closest to the normal level. The heartbeats per minute in the TZ group from 10 minutes were lower than in the P group until the end of anesthesia. Blood pressure in the TZ group was higher throughout the duration of the procedure than in the P group. The internal body temperature showed a decreasing trend in both groups, with lower values recorded in the TZ group. In the TZ group, a significant reduction in the demand for anesthetic gases was demonstrated.

The post-anesthetic period was calm in most cases and was assessed as good in both groups. Within 2 hours from the end of the procedure, all animals were conscious, took a standing position, and moved without any problems. Most of the animals of both groups did not show severe pain symptoms requiring emergency analgesia.

In summary, the protocol of partial intravenous anesthesia with the use of low doses of tiletamine with zolazepam and low concentration of anesthetic gases ensures the correct level of anesthesia, stability of intraoperative parameters and a good post-anesthetic period. The

evaluated protocol is useful for laparoscopic procedures within the abdominal cavity and contributes to the reduction of the demand for anesthetic gases.