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The Comparative Anesthetic Effects of Tiletamine - Zolazepam and Tiletamine - Zolazepam Plus Xylazine in Dogs

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Abstract The present project was aimed to evaluate the use of Tiletamine – Zolazepam and Tiletamine - Zolazepam plus xylazine to produce anesthetic effects in stray dogs undergoing sterilization. Twenty female dogs were divided into 4 groups; control group receiving 10 mg/kg Tiletamine – Zolazepam (TZ); group 1, 2 and 3 receiving 1 mg/kg xylazine plus 3, 2 and 1 mg/kg TZ, respectively. TZ alone produced rapid onset (~0.7 min.); while in the present of xylazine, this period was prolonged (~2-3 min.). The effective handling period, of which the effectiveness of endotracheal intubation was monitored, and the recovery period of the control group were significantly longer than those of group 1, 2 and 3. The average effective handling period and recovery period obtained from animals in control; group 1; 2; and 3 were 33.6 min. and 67.8 min.; 16.67 min. and 24.83 min.; 10.75 min. and 14.25 min.; and 3.4 min. and 5.8 min., respectively. It was noted, however, that only dogs in control, group 1 and 2 maintained an adequate plane of anesthesia and surgical sterilization was completed without an additional dose of TZ. In addition, heart rate, respiration rate, body temperature and reflex responses were recorded. After receiving TZ, the increased heart rate was observed in all, except group 3, studied groups during the first 5 min. and then gradually declined. The respiration rate was also increase in all groups, while body temperature decreased over time. The recorded oxygen saturation remained mostly unchanged. It was also noted that the combination of xylazine with TZ diminished both palpebral and pedal reflexes and reduced muscle rigidity with a smooth recovery.

Keywords : Anesthetic effects, Dogs, Xylazine, Tiletamine – Zolazepam