Comparative study of two anesthetic combinations (tiletamine/zolazepam and xylazine or tiletamine/zolazepam and midazolam) in pigs

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Introduction To evaluate the anesthetic and cardiorespiratory effects of the tiletamine/ zolazepam/ xylazine (TZX) combination and tiletamine/ zolazepam/ midazolam (TZM) combination.

Materials and Methods Eight Landrace and Yorkshire mixed pigs, weighing 25.3 ± 3.3 kg. Pigs received two different anesthetic combinations: 2mg kg^{-1} intramuscular (IM) tiletamine/zolazepam (TZ) and 1mg kg^{-1} IM xylazine (X), 2mg kg^{-1} IM tiletamine/zolazepam (TZ) and 0.5mg kg^{-1} intravenous (IV) midazolam (M). Induction time, anesthesia time, standing time and walking time were recorded for each pig. Heart rate, respiratory rate, arterial blood pressure, blood gases and electrocardiogram were monitored and recorded 0, 5, 15, 30, 45, 60 minutes. Sedation, analgesia, muscle relaxation, posture and auditory response were subjectively evaluated every 15 minutes during anesthesia.

Result The anesthesia of all pigs were successful. Both drug combinations provided a smooth induction and good immobilization. Heart rate decreased significantly with TZX. Mean arterial blood pressure was significantly higher during 15, 30 min in the TZX. There was a marked decrease in arterial pH in all groups. 5 min after drug injection, TCO_2 values were significantly increased in TZM compared with TZX.

Conclusion The quality of anesthesia was greatest with both groups. All combinations allowed recoveries of similar duration. Neither drug combination was effective in pigs at the doses given.

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