Protocol Evaluation for General Anesthesia in Rabbits

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SUMMARY

Getting a good quality anesthesia is necessary both for surgery in veterinary clinics and in research laboratories, where animal welfare conditions must prevail. To achieve this goal, it had been developed different anesthetic protocols. This article aims to study the three of these protocols. All these protocols have been used on patients who came to the clinic of the Faculty of Veterinary Medicine Bucharest.

The first protocol tested is based on induction of anesthesia with midazolam and medetomidine administered intramuscularly. Maintenance was achieved using propofol anestetizei administered intravenously. Medetomidine has the advantage that in addition to the sedative effect, has an analgesic effect, but produces changes in the cardiovascular system, but much weaker in comparison with xylazine (vasoconstriction, hypertension followed by hypotension, lowering the heart's rate and output). Midazolam is used as a sedative and has less cardiopulmonary depression effects and does not accumulate in the body after repeated doses. Propofol is an agent that successfully replaces pentobarbitalului administration in rabbits. This is due to reduced side effects and awakening much smoother. Following these characteristics, this protocol is used in mild interventions, and the patient is suffering from cardio pulmonary, liver or kidney disorders.

The second protocol uses only xylazine and ketamine. In the induction phase is given both intramuscularly, following by maintenance to be carried out using a mix of both administered intravenously. Xylazine will have in addition sedative and analgesic effects, but adverse effects are typical for \( \alpha_2 \) antagonists. This protocol has a stronger analgesia and sedation, but with repercussions on the cardiopulmonary system.

The third and final protocol uses an induction with subcutaneous acepromazine and xylazine intramuscularly, followed by intramuscular ketamine. This protocol produces a long-term anesthesia and high cardiopulmonary effects which can be partial solved by pre-atropinisation.

All three protocols were analyzed in terms of analgesia and sedation level, and duration of anesthesia.

Keywords: neuroleptanalgesia, rabbit, atropine, midazolam, medetomidine, xylazine, propofol, ketamine
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REFERENCES


[5] Church Bob, B. Archaeologz, B. Yoology, ASM, ICAZ, SAA, SAS; Zooarchaeological Analzsis and Research; Columbia, MO.


[24] M.J. Murray; Practice Tips Rabbits; Monterey Bay Aquarium, Monterey, CA, USA.


[35] Tutunaru A.C., Leau F., Leau T.; Particular Aspects of Anesthesia in Rabbits; Bulletin UASVM, Veterinary Medicine 67(2)/2010, ISSN 1843-5270; Electronic ISSN 1843-5378; 226-232.
[40] *** Rabbit anesthesia and analgesia. www.lar.iastate.edu/index.php?option=c...