

ских ошибок обуславливаются невнимательным отношением, проведением обследования животного с несоблюдением правил и т.д.

Мы не можем сказать, что ветеринарный врач сразу становится опытным. Только наблюдая, переживая и изучая реальные явления, он постепенно совершенствует свое мастерство. А при сочетании собственных практических данных и данных, почерпнутых в специальной литературе, опыт становится более весомым. Если врач любит свое дело и постоянно стремится к активному накоплению знаний и умений, высокая квалификация ему обеспечена.

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EXPERIENCE OF TWO-COMPONENTS ANESTHESIA ON LABORATORY ANIMALS DURING AN ACUTE EXPERIMENT

The experience of using small laboratory animals for scientific purposes goes back for more than 2,000 years. Starting from the 4th century BC, scientists have done many experiments on animals, discovered and proved many fundamental postulates of modern science concerning biology, anatomy, physics, medicine, etc. In one year during experiments, scientists use from 50 to 100 million laboratory animal. All this demonstrates the importance of using laboratory animals for scientific purposes. However, experiments on animals have done a significant change to the positive direction over the past centuries, which almost depends on the achievements of clinical pharmacology (in particular veterinary). The main requirements for anesthesia on animals are: sufficient for a full-fledged experimental intervention, "manageability" of anesthesia, economical efficiency, accessibility in the territory of Belarus Republic, ease of use.

Currently, many drugs have been developed and implemented that can be used for anesthesia to a laboratory animal. However, not all drugs are registered in Belarus and can be used legally in scientific researches. The search for the optimal scheme for the use of these drugs is still of some scientific interest.

The purpose of this work is to study the compliance with these requirements of the scheme for anesthesia (Xilavit + thiopental sodium), which is used in the Department of Operational Surgery and Topographic anatomy of VSMU for surgical interventions on animals for educational

and scientific purposes. At the current moment, 2020-2021, both drugs (Xilavit & thiopental-sodium) were certified and approved to be used in veterinary practice at the territory of Belarus Republic.

In the 2020-2021, 40 "Chinchilla" rabbits weighing 3.5-4.0 kg of both sexes aged 6 months till 1-year-old, were being operated during a year in the operating department of the operational surgery and topographical anatomy of VSMU, with the aim of teaching students the main stages of surgery or during an acute scientific experiment. These laboratory animals were anaesthetized under the following scheme: introductory anesthesia - xylazine hydrochloride "Xilavit" - 0.2 ml/kg of animal body weight (4 mg per 1 kg of animal weight) - subcutaneously. Then within 5-10 minutes - the waiting period - which allows the animal to reduce anxiety and relax, to place itself on the operating table and catheterize the peripheral vein. After 10 minutes a solution of 2.5% of sodium thiopental is intravenously injected until reaching the necessary stage of anesthesia (unconsciousness, moderate muscle relaxation, moderate bradypnoe, analgesia). During the operation, gradual micro-bolus injections of small volumes (0.5 ml - 1 ml) of sodium thiopentalis used as the depth of anesthesia decreases.

The anesthesia and its course proceeded without any disturbances for 39 animals. There is a moderate reciprocal potentiating effect of these drugs. The dose of xylazine hydrochloride was constant, according to the specified dosage, and rarely exceeded 16 mg of the drug per anesthesia. While the consumption of sodium thiopental directly depended on the age of the animal, mass, and duration of surgery ranged from 15 ml to 25 ml per anesthesia, which corresponds to 1 bottle of dry substance "sodium thiopental" sterile - 1.0 g. The usage of xylazine hydrochloride for premedication significantly simplified the manipulation with the animal. However, one laboratory animal had a breath stop after the injection of thiopental, which was fatal, although the dose was not higher than the estimated dose but apparently, there was an individual intolerance in this case.

Therefore, the search of a reasonable scheme of anesthesiological procedure when performing an experiment on an animal is difficult to consider like fully completed. The infinite growing range of pharmacological drugs opens new horizons for researchers. So the successful combination of already well-known drugs can have some success. The scheme used in our experiments (Xilavit + thiopental sodium) fully meets the requirements of anesthesia for animals participating in the scientific experiment. Certification at the territory of Belarus Republic, controllability and ease of use are its advantages. However, the issues of individual intolerance of the scheme components are not completely clear and requires additional researches.