

Group I—Normal non-pregnant controls were specifically chosen litter mates of the animals in Group II. They were all killed at approximately the same body weight of 185 gm.

Group II—Normal pregnant group—Litter mates of Group I were impregnated at about 175 gm. At least one animal was killed on each day of the gestation period, which in a rat is 22 days. Impregnation was done at this age on the assumption that they would have attained an average body weight similar to group I when killed if pregnancy had not been induced.

Group III—Consisted of a group of pregnant animals retained on a diet deficient in the anti-sterility vitamin E, after having passed through one gestation period with a diet deficient in vitamin E.

Group IV—Is a group of pregnant animals which was fed vitamin E after having passed through one gestation period with a diet deficient in vitamin E. This procedure did not apparently modify the relative volume of the lobes of the hypophysis as compared with group III.

5841

Avertin as an Anesthetic During Experimental Operations on Central Nervous System of Cat.

G. L. RASMUSSEN. (Introduced by A. T. Rasmussen.)

From the Department of Anatomy, University of Minnesota.

In operations on the central nervous system in cats, we have found that Avertin has many advantages over such an anesthetic as ether. We have used it on about 100 animals and find it to be of special value in several respects.

1. Being given per rectum, the dangers of contamination by the ether mask are eliminated when operating on the head region.

2. The animals may be made to remain perfectly quiet through the entire operation even if lasting up to 5 hours, without the use of any other drug, thus reducing the number of assistants—an anesthetist not being needed. It is therefore especially valuable where long periods of immobility are required, as in experiments where electrodes are to be kept for a considerable time in exactly the same place.

3. The increase of flow of mucus and saliva which is often produced by ether is eliminated by the use of Avertin. This feature is

especially desirable in operations such as those on the base of the skull, in which the trachea must be retracted to make good exposure.

4. The danger of tongue swallowing is eliminated since Avertin induces the tongue to drop forward.

5. After the use of Avertin the animal sleeps quietly for 24-48 hours. This period of rest encourages wound healing and reduces the danger of hemorrhage and infection, since the animal cannot open the wound.

We found it convenient to etherize the animal before administering the Avertin. Because of this fact, it is necessary to take special precaution against over-dosage due to the combined effect of ether and Avertin. The method which we found advantageous is to etherize the animal only to the point where it can be tied down to the operating board without resistance. Then $\frac{1}{3}$ - $\frac{1}{2}$ of the usual dosage of Avertin for cats (which is 300 mg. per kilo of body weight) is given, depending on the depth of narcosis produced by the ether. Later, when the animal begins to awaken, $\frac{1}{2}$ of the remaining Avertin is given. Usually after this dosage, the animal usually passes into a state of narcosis. The remainder of the dosage is given only if the animal shows signs of awakening during the operation, or it may be given at the end of the operation in order to keep the animal asleep for a long period following the operation.

In a few cases of respiratory failure due to over-dosage, artificial respiration usually restored the animals.