rubber tubing, fits across the nose immediately below the eyes. As demonstrated in the figure, the nose piece can be mounted from the vertical rod (F) by means of two straight bars (H) and three right angle clamps (C). For the posterior approach the Buchanan holder is turned in the universal clamp until the side arms of the holder are almost vertical, in order to obtain proper exposure of the operative site. The nose piece (B) can then be adjusted.

The Buchanan holder in the size shown accommodates monkeys weighing up to 4 kilograms and, used without ear plugs, is also satisfactory for guinea pigs. In neither the monkey nor the guinea pig does the apparatus rupture the tympanic membrane or do apparent injury to the external ear.

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SODIUM DIPHENYLHYDANTOINATE AND EXPERIMENTAL EPILEPSY

SODIUM diphenylhydantoinate is a drug introduced by Putnam and Merritt in clinical practice for treatment of epileptic seizures on account of their particularly efficient anti-convulsant action with the least hypnotic effect. Primarily such results were obtained on cats with convulsions induced by electrical stimulation of the cerebral cortex.[1] Clinical investigations were performed later.[2]

In this article are discussed experiments performed in our laboratory with sodium diphenylhydantoinate in an experimental epileptiform seizure of the frog induced by quick cooling of the spinal cord. The results reported are a résumé of a more detailed paper in preparation.[3] The technic employed was recently reported[4,5] and now is usual in our laboratory. For the Brazilian frog (*L. ocellatus*) cooling of the isolated spinal cord of the preparation to a temperature below 8° C. produces an epileptiform seizure which lasts 20 to 40 seconds. For the American and European frog the cooling must be below 0° C.

The anti-convulsant action has been studied injecting sodium diphenylhydantoinate solution in the abdominal lymphatic sac before the isolated spinal cord preparations were started. The doses employed varied from 0.05–0.90 grams per kilogram of body weight. Doses from 0.05–0.09 grams did not avoid the production of the attacks, but sometimes they were less severe. Doses greater than 0.10 grams per kilogram commence to hinder the production of the convulsions and 0.15 grams prevent the epileptiform seizure in nearly all the frogs injected. This anti-convulsant effect was observed with no hypnotic effect, the frog jumping quite well in the laboratory. When the medulla was sectioned and the isolated spinal cord prepared, the flexor reflexes of the legs were as in the normal preparations. Such anti-convulsant action is still observed after 2 days elapse between the injection of the sodium diphenylhydantoinate and the cooling of the spinal cord. Hypnotic effects were obtained only with doses superior to 0.20 grams per kilogram. The lethal dose has not been determined, being superior to 0.90 grams.

Sodium diphenylhydantoinate acts on the spinal cord of the frog, hindering the epileptiform seizures induced by quick cooling with no hypnotic effects and disturbances of the spinal reflexes.

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