

temporary depression followed by recovery and sometimes stimulation while the intestine was still in the solution of the salt. Complete abolition of rhythmic contractions and decrease of tonus were observed when much higher concentrations were used, but the effect was not permanent in these experiments as recovery in pure Locke solution took place after the intestine had been suspended in  $N/500$  nickel acetate for twelve minutes. The reaction to pilocarpine and of barium was studied in experiments with both of the metals. The evidence obtained points to injury to nerve endings as well as of the muscle fiber, but the latter was in some experiments much more resistant.

12 (1076)

**A note on the failure of pituitrin to sensitize the sympathetic system.**

By R. G. HOSKINS (by invitation).

[*From the Laboratory of Physiology of the Northwestern University Medical School.*]

In 1912 Kepinow published the conclusion that the injection of small quantities of pituitary extract "sensitizes" the point of attack of epinephrin.<sup>1</sup> His observations were that a given dose of epinephrin produced a greater mydriatic effect in rabbits and cats, a greater vasoconstriction in the Loewi-Trendelenberg frog preparation and a greater vasomotor effect in rabbits and dogs if immediately before hand a minimal dose of pituitary preparation had been injected. Kepinow's work has been quoted as the basis for a rather far reaching conclusion that the pituitary gland has normally the function of promoting the activity of the sympathetic nervous system.

In various researches on the vasomotor system we have had occasion to use pituitary extract in connection with epinephrin and nicotin and it became important to know to what extent sympathetic sensitization occurs. As our previous work has been done exclusively on dogs we have investigated the matter in this

---

<sup>1</sup> Kepinow, *Archiv für experimentelle Pathologie und Pharmakologie*, 1912, LXVII, 247.

species only. Kepinow used two kinds of pituitary material, an extract prepared by himself, and the commercial preparation "Pituitrin" made by Parke Davis and Co. Kepinow states that both preparations gave similar effects. Our experiments were made with "Pituitrin" only.

Since the results are negative they may be reported very briefly. The procedure was to determine the effects of injections of given quantities of "adrenalin" and of nicotin, selected to give a moderate rise of blood pressure. About 1 c.c. of adrenalin, 1 : 100,000, and 1 c.c. of nicotin 1 : 4,000 are suitable for medium-sized dogs. Having determined the reactions to these drugs, pituitrin was injected by vein in quantity to give a slight rise of pressure, *e. g.*, .05 c.c. At various intervals from one half to several minutes after this injection, the adrenalin and nicotin injections were repeated. In no case was a significant change of reaction noted. In most of the animals the vagi were cut, but this procedure made no apparent difference in results.

In view of the restricted value of negative results some hesitancy is felt in offering them for publication. In further consideration, however, of the vast number of unjustified generalizations in the literature of internal secretion they are offered for what they may be worth.

13 (1077)

**The production of atrioventricular rhythm in man after the administration of atropin. (Preliminary Communication.)**

By **FRANK N. WILSON, M.D.** (by invitation).

[*From the Department of Internal Medicine, University of Michigan.*]

During the past year two patients with cardiac complaints were given repeated injections of 1 mg. atropin sulphate and on each occasion atrioventricular rhythm was observed. This usually appeared in from eight to ten minutes after the drug was given, it persisted for only a few minutes, and disappeared before the maximum effect of the drug was reached.

In order to determine whether this tendency to A-V rhythm was peculiar to these patients or whether it exists normally, a