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Studies on experimental cretinism. IV. The influence of thyroidectomy on the central nervous system.

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Rabbits thyroidectomized 2 to 3 weeks after birth have been allowed to develop in a hypothyroid condition for 10 to 16 weeks. At that time marked symptoms of cretinism are apparent. These rabbits have then received daily doses of dessicated thyroid by mouth or intravenous injections of Kendall's thyroxin, until the end of the growth period. If the thyroid treatment is then discontinued and the animal allowed to live for a long period of time, usually eight months or more, the posterior extremities become spastic. Reflexes are exaggerated and a slowly progressive paralysis occurs, which results in complete inability to use the hind legs. Histological study of the spinal cord shows degenerative changes. The blood picture is that of primary anemia.

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Quinin in paroxysmal auricular tachycardia.

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Wenckebach,[1] in an article upon cinchona derivatives in the treatment of heart disorders, stated that "an intravenous injection of quinin may stop an attack of paroxysmal tachycardia in many cases." This therapeutic suggestion was tested 10 times among 5 patients suffering from organic heart disease and paroxysmal auricular tachycardia, during a paroxysm. In all cases the effect of posture and the various forms of vagal pressure were

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[1] Wenckebach, C., *J. Am. Med. Assn.*, 1923, lxli, 472.

first essayed. This was without avail in all. Continuous electrocardiography upon a lead selected from the diagnostic electrocardiogram was begun before the injection commenced and continued until 2 minutes after its completion. The injection occupied about 5 minutes. The dihydrochloride salt of quinin in 0.3 to 0.6 gram doses diluted to 10 cc. was used.

In six injections among four of these patients there was no alteration produced in the tachycardial rhythm governing the heart beat. In the fifth patient, the attacks came to an end with a single auricular premature contraction preceding the onset of the normal sinus rhythm, approximately one and one-half minutes after the injection was completed. This was repeated in three more paroxysms. This patient was having paroxysms lasting about one hour and a half four to six times a day. The injection of the drug did not lessen the frequency of the attacks. In one instance, not included among these ten, a paroxysm came to an end just as the quinin was about to be administered. This points to the caution with which inferences regarding the positive effects of therapy in this condition must be surveyed. In all of these patients no more paroxysms appeared after the oral administration of quinidin.

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Clinical action of adrenalin upon premature contractions.

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Among 12 patients with varying types of heart disease presenting persistent premature contractions, including all the important etiologic, anatomic, and function combinations, epinephrin in a dose of 1 cc. in a solution of 1-1000 was injected hypodermically 18 times. Electrocardiograms of one minute duration on a previously selected lead were taken every five minutes; five before and five or more after the injection.

A considerable increase in the average number of premature contractions occurring per minute resulted in all cases begin-