

3388

Action of the Sympathetic Upon the Excitatory Process in the Dog's Heart.**E. COWLES ANDRUS AND LOUIS E. MARTIN.**

(Introduced by Edward P. Carter.)

From the Cardiographic Laboratory of the Johns Hopkins Hospital and University.

It was the purpose of the present study to investigate the effect of the sympathetic nerves upon the development and propagation of the excitatory process in the dog's heart. After the vagus had been functionally excluded by atropin, the sympathetic endings were stimulated by means of adrenalin or paralyzed with ergotamine.

The intravenous injection of adrenalin, 0.25 to 0.50 cc. of 1/50,000 solution, brought about within one-half to one minute a conspicuous acceleration of the rate of beat, a slight shortening of the P-R interval, and an increase in the rate of transmission in the auricle of 3 to 400 mm. per sec. Ergotamine (0.25 to 1.0 mg.), on the other hand, caused consistently a slowing in rate, a lengthening of the P-R interval, and a delay in intra-auricular conduction. This effect, however, came on much more slowly than that produced by adrenalin, and lasted for from one to two hours.