

being made to determine the limitations of its usefulness in initiating diuresis in cases of edema which have ceased to respond to dietary and other ordinary therapeutic measures.

## 6339

**The Large Q Wave in Lead III of the Electrocardiogram.**

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Although arteriosclerotic heart disease is not uncommon in the negro, angina pectoris is rare and coronary thrombosis much rarer. In view of the recent interest in large Q waves in lead III of the electrocardiogram as evidence of coronary artery disease, particularly coronary thrombosis, it was thought that a comparison of whites and negroes might be of interest.

Electrocardiograms which fulfilled the criteria given by Pardee<sup>1</sup> for large Q in lead III were selected; 192 electrocardiograms from 5280 patients, of whom approximately 4830 had heart disease. Of these 192, 143 were from whites and 49 from negroes, an incidence of 3.8% and 2.3% respectively.

In the white group with large Q in lead III, 46% gave a history of cardiac pain; 49.6% reported no pain, while 4.2% were doubtful. In the negro group, 30.6% gave a history of pain; 61.2%, no pain; 8.2% doubtful. Conversely among 162 white patients with cardiac pain, the incidence of large Q in lead III was over 12%, while among 89 negroes with heart pain, the incidence was nearly 4.5%.

Of 60 patients with a definite clinical picture of coronary thrombosis, 23, or 38% presented a large Q wave in lead III.

That arteriosclerotic heart disease is the chief cause of the large Q is shown by the following figures. A study of about one-third of all the patients indicated the following percentages of clinical diagnoses in the various etiological groups. White patients: arteriosclerotic 26.9%; hypertensive 13.6%; syphilitic 8.7%; rheumatic 12.7%; other, including unknowns and normals, 38.1%. Negro patients: arteriosclerotic 13.1%; hypertensive 23.6%; syphilitic 34.1%; rheumatic 9.8%; other 19.4%. In contrast to this, the various etiological factors contributed large Q waves in the fol-

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<sup>1</sup> Pardee, H. E. B., *Arch. Int. Med.*, 1930, **46**, 470.

lowing proportions: Whites: arteriosclerotic 41.3%; hypertensive 36.4%; syphilitic 4.9%; rheumatic 2.8%; other 14.7%. Negroes: arteriosclerotic 8.2%; hypertensive 32.7%; syphilitic 32.7%; rheumatic 6.1%; other 20.3%. Among white patients, the arteriosclerotic-hypertensive group constituted 40.5% of the whole and contributed 77.7% of the large Q waves. Among the negroes, this group was 36.7% of the whole, and contributed 40.9% of the large Q waves found among negroes.

Among 150 patients without evidence of heart disease, 3, or 2%, showed a large Q wave in lead III, but two of these Q waves were not typical and were barely included on the basis of the criteria given by Pardee.

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**Physiological Effects of Injections of Various Benzene and Furan Derivatives into the Cockroach.**

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This is a report of experiments upon the physiological effects of injections of various benzene and furan derivatives into the cockroach, *Periplaneta orientalis* (Linn.). Some of these compounds have been used in spray<sup>1</sup>,<sup>2</sup> and vapor<sup>3</sup> form upon certain insects but nothing is known of the effects of injections of the substances into the roach. Injection studies on insects have been largely confined to larvae.<sup>4</sup>,<sup>5</sup> In these experiments, large nymphs and a few adults were used, all in apparently normal condition.

Each experiment consisted of the following procedure: (1) The body weights of 6 normal animals were obtained. (2) Initial heart rates and estimates of the degree of contraction were obtained, using a method of illumination already described.<sup>6</sup> (3) An estimate of the amount of crop peristalsis was noted. (4) Meanwhile, solutions or emulsions, stabilized with 10 mg. Witte's peptone per 5 cc. emulsion, were prepared in 1, 2, 4, 6, 8 and 10% concentrations in Hob-

<sup>1</sup> Richardson, C. H., and Smith, C. R., *U. S. D. A. Bull.*, 1160, 1923.

<sup>2</sup> Moore, Wm., *J. Agr. Res.*, 1917, **9**, 371.

<sup>3</sup> Holt, Jos. J. H., *Lancet*, 1916, **1**, 1136.

<sup>4</sup> Campbell, F. L., *J. Gen. Physiol.*, 1926, **9**, 433.

<sup>5</sup> Hoekenyos, G., *J. Ec. Ent.*, 1932, **25**, 253.

<sup>6</sup> Yeager, J. Franklin, *Ann. Ent. Soc. Am.*, 1931, **24**, 739.