A noteworthy observation was the absence of any thrombosis of the lining of the cavities of the hearts of these dogs, a state of affairs in marked contrast with that in the human heart where mural thrombosis is a frequent sequence of interference with the coronary circulation.

Further similar experiments are in progress.

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Effects of Pituitary Antidiuresis on Non-Cardiac Edema.

W. H. THOMPSON, MILDRED ZIEGLER AND IRVINE MC QUARRIE.

From the Department of Pediatrics, University of Minnesota Medical School.

From a previous study, describing the induction of pituitary antidiuresis in non-edematous subjects,[1] we were impressed by the magnitude of the net loss in body weight at the end of the recovery period. The obvious fact, that the reduction in weight which follows withdrawal of the antidiuretic agent is due under these conditions to loss of body water with its accompanying mineral elements, suggested the desirability of determining the effects of the procedure on the water and mineral exchanges in the presence of edema.

This has been done in 2 cases of typical lipoid nephrosis, one of chronic glomerulonephritis with superimposed nephrosis and one of edema of undetermined etiology. The total serum proteins were low in these subjects at the time of the tests. The case of edema of undetermined cause differed from the other 3 in showing no proteinuria and no increase in the blood lipoids. Throughout the entire period of observation all 4 patients were maintained in the metabolism ward under practically uniform conditions as regards room temperature and humidity, diet and routine for obtaining the body weight and for collecting samples of the excreta. The total water exchange was determined according to the method outlined by Newburg and Johnston.[2] After a preliminary control period of several days on a standard diet relatively low in NaCl, the patient was given a medium-sized dose of the antidiuretic pituitary extract (pitressin P. D.) subcutaneously at 3-hourly intervals for one or 2 days, the exact body weight being measured every 6 hours.

[1] McQuarrie, Irvine and Peeler, D. B., *J. Clin. Invest.*, 1931, **10**, 915.

[2] Newburg, L. H., and Johnston, M. H., *J. Clin. Invest.*, 1930, **8**, 161.

After this had been increased by from 3 to 5% due to water storage, the pitressin was discontinued. Balances for the following mineral elements were determined: Na, K, Ca, Mg, Cl, N, S and P. The entire procedure was carried out on 2 occasions for each patient.

The results may be briefly summarized as follows: All 4 of the patients showed a visible increase in the intensity of the edema at the end of the period of antidiuresis. That the water thus forcibly retained was temporarily stored in the extracellular reservoirs of the body, and not within the cells, is indicated by the fact that the chief mineral elements finally excreted with it were Na and Cl. The response of the patient with chronic glomerulo-nephritis differed sharply on both occasions from the other subjects studied and from the normal by the fact that her weight level at the end of the test was no lower than that of the fore period. Whereas the normal subject usually loses considerable amounts of Na and Cl during and immediately following the period of antidiuresis (Manchester[3]), this patient showed no increase in the elimination of these or any of the other inorganic elements. In contrast to this response, the 2 patients with primary nephrosis showed strongly negative NaCl balances and finally corresponding losses of body water. In the younger of the 2 there was on 2 successive occasions a definite "escape" from the antidiuretic effect of the extract before the gain in weight had reached the height usually attained. The diuresis which followed was continuous over a period of several days on the first occasion, until the edema had almost completely disappeared. The weight was decreased from 20.2 to 16.6 kg. in 5 days. Repetition of the procedure shortly after the weight had again become stationary at a lower level resulted in a still further reduction. The response of the patient with edema of undetermined etiology was intermediate between that of the case of chronic glomerulonephritis and that of the 2 cases of nephrosis. The net loss of body water in this patient was roughly proportional to the excess of Na and Cl excreted as in the other cases. Aside from this effect on the Na and Cl balances and the flushing out of a small amount of extra K during the period of recovery diuresis, no significant disturbance in the mineral exchange was observed in any of the patients studied. Except for a fairly marked increase in the albumin and a simultaneous decrease in the globulin fraction in one case of nephrosis, the serum proteins were essentially unchanged. The lecethin and cholesterol of the plasma remained unaffected. Since no ill effects result from the procedure as carried out here, further studies are

[3] Manchester, R. C., PROC. SOC. EXP. BIOL. AND MED., 1932, **29**, 717.

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.

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The Large Q Wave in Lead III of the Electrocardiogram.

RICHARD ASHMAN, B. J. DE LAUREAL, EDGAR HULL AND DOROTHY DRAWE.

From the Louisiana State University Medical Center, New Orleans.

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[1] 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-

[1] Pardee, H. E. B., *Arch. Int. Med.*, 1930, **46**, 470.