hydroxy-11-dehydrocorticosterone as compared to DCA in adrenalectomized animals given large doses of water.[1]

The chloride excretion figures are not to be interpreted as measures of renal activity, since the urine samples were contaminated with diarrheal fluid, particularly in the controls. There is a loss of considerable fluid through the intestine in terminal stages apparently due to an eventual failure of water absorption from the intestine.[7] The chloride figures are quoted to show, however, that the protective action of the cortical substances is not through a prevention of the loss of this ion from the body.

While a more detailed study of the action of cortical steroids in the response to excess water will be reported elsewhere, it is perhaps noteworthy that most types of stress in which cortical substances have been given intact animals without consistent success have been shock-producing stimuli, associated with marked hypotension. Water intoxication is a different type of phenomenon in that blood pressure is well maintained until near the time of death.[6,7,8]

Summary. Large doses of adrenal cortical extract or desoxycorticosterone acetate will protect normal rats from doses of water which otherwise produce lethal water intoxication.

[7] Gaunt, R., unpublished observations.

[8] Swingle, W. W., Parkins, W. M., Taylor, A. R., and Hays, H. W., *Am. J. Physiol.*, 1937, **119**, 557.

14286 P

Hair Loss in Male Dogs Fed Stilbestrol.

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Failure of regeneration and loss of hair have been reported[1] in dogs given estradiol benzoate. No account has been found of the same phenomenon in dogs which received synthetic estrogens.

In a recent experiment* 4 male dogs received *by mouth diethylstilbestrol,*† 5 mg tablets, over a period of several months. These animals and 2 other male dogs (serving as controls) were also injected subfascially with methylcholanthrene, the changes resulting from which will be described elsewhere. All of the animals were mongrels about 1½ to 3 years old at the start of the experiment. The weights ranged between 15 and 27 lb. and did not vary significantly.

The first dog received 330 mg of stilbestrol in 20 doses of 5 mg, 19 of 10 mg and 2 of 20 mg in a period of 129 days, at the end of which the hair was missing from the right flank.

The second dog received 1790 mg of stilbestrol in 20 doses of 5 mg and 169 of 10 mg in a period of 292 days, at the end of which the hair was generally thinned, was largely missing from the abdomen and penis, and had failed to regenerate on the forelegs at areas clipped for vein puncture.

The third dog received 1850 mg of stilbestrol in 185 doses of 10 mg in a period of 280 days, at the end of which the hair was missing from the thighs, buttocks, perineum, abdomen, face, and the ventral surface of the tail, thorax, and neck.

The fourth dog received 2985 mg of stilbestrol in 100 doses of 10 mg, 6 of 15 mg, 6 of 20 mg, and 71 of 25 mg in a period of 291 days, at the end of which the hair was absent from the base of the tail, the lumbar regions, the scapular regions, the abdomen,

[1] Gardner, W. U., and DeVita, J., *Yale J. Biol. and Med.*, 1940, **13**, 213.

* Aided by a grant of the Council on Research from the fund of the Graduate School of the University of Colorado.

† Furnished through the courtesy of Dr. D. C. Hines of Eli Lilly and Company.

the penis, the circumocular areas, and the ventral surface of the jaw, and had failed to regenerate on the forelegs at areas clipped for vein puncture.

The fifth and sixth dogs used as controls showed no loss of hair and normal regeneration of hair on the forelegs at areas clipped for vein puncture. The 3 experimental animals receiving the largest doses of stilbestrol revealed the maximum loss of hair in the middle of the winter of 1942-43, when the period of observation was terminated and when the 2 control dogs and several other dogs in the runs employed in other, nonhormonal experiments had a uniformly thick coat of hair.

In view of the loss of hair in male dogs following the peroral administration of stilbestrol over several months, a similar phenomenon might be anticipated in humans, particularly in the light of a recent clinical note[2] describing the loss of hair from the head of a young woman who had been given stilbestrol for several months.

[2] *J. A. M. A.*, 1943, **121**, 224.

14287

Acid Phosphatase Content of Nuclei of Chicken Erythrocytes.

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The recent discovery of 6 important enzymes in nuclei isolated from rat liver cells[1] has made it seem desirable to extend enzyme investigations to an entirely different type of nucleus. In this work we have investigated the acid phosphatase content of isolated chicken erythrocyte nuclei which now can be obtained in relatively undamaged condition.[2,3] The nuclei were prepared by the method of Lan and Dounce[3] from washed erythrocytes prepared from fresh defibrinated chicken blood obtained at the slaughter house. A photograph of these nuclei is shown in Fig. 1. Acid phosphatase was chosen for the investigation because it is relatively easy to determine and already has been reported in whole erythrocytes.[4,5] Moreover, it is one of the enzymes found in isolated liver cell nuclei.[1]

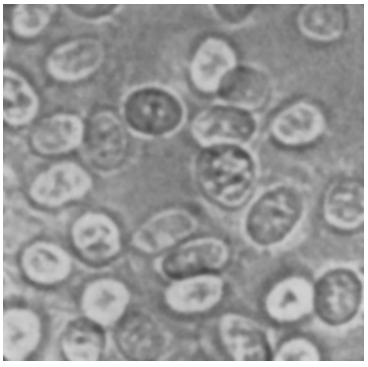

FIG. 1.

Isolated nuclei of chicken erythrocytes, oil immersion, unstained.

The method employed for the determination of the enzyme was a slight modification of Gutman and Gutman's adaptation[6] of the original alkaline phosphatase method of King and Armstrong[7] to the determination of acid

[1] Dounce, A. L., *J. Biol. Chem.*, 1943, **147**, 685.

[2] Laskowski, M., PROC. SOC. EXP. BIOL. AND MED., 1942, **49**, 354.

[3] Dounce, A. L., and Lan, T. H., *Science*, 1943, **97**, 584.

[4] Roche, J., and Bullinger, E., *Enzymologia*, 1939, **7**, 278.

[5] Roche, J., *Biochem. J.*, 1931, **25**, 1724.

[6] Gutman, E. B., and Gutman, A. B., PROC. SOC. EXP. BIOL. AND MED., 1941, **47**, 513.

[7] King, E. J., and Armstrong, A. R., *Canad. Med. Assn. J.*, 1934, **31**, 376.