separation of the gonad stimulating hormones of the anterior lobe of the hypophysis.[3]

The purified extract of hormone "B" is almost entirely free from the oestrus producing hormone. This is of great importance since it has been found that the action of hormone "B" depends to a large extent on the presence of the oestrus producing hormone. [4, 5] It is therefore desirable to have an extract free from oestrin in order to study the relationship of the 2 hormones in certain physiological reactions.

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A Renal Lesion Following Plasmapheresis.

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Chronic nephritis with edema (nephrosis) is associated with a marked albuminuria and a lowered total serum protein as pointed out by Epstein.[1] The importance of the level of the albumin fraction in relation to the appearance of the edema, both clinically and experimentally, has been emphasized by Barker and Kirk.[2] In an attempt to study the effect of the low proteinemia on the kidneys, a similarly low serum albumin level (about 1 gm. per 100 cc. of blood serum) has been produced and maintained in a series of dogs by plasmapheresis. Renal tissue has been obtained from these dogs by nephrectomy or by destroying the animal at periods varying from 2 weeks to 6 months. Gross and microscopic studies have shown the beginning and rather rapid progression of a degenerative renal lesion.

The first changes were noticeable at the end of 2 weeks at which time the kidney appeared swollen. The cortex was relatively thickened and was a brownish-gray color. Microscopically, cloudy swelling was noted particularly in the convoluted tubules together with desquamation of the tubular epithelium and extrusion of many nuclei. There was some hyaline droplet formation and occasional shrinkage of the glomerular tufts. After about one month of plas-

[3] Claus, P. E., PROC. SOC. EXP. BIOL. AND MED., 1929, xxvii, 29.

[4] Weichert, C. K., PROC. SOC. EXP. BIOL. AND MED., 1928, xxv, 490.

[5] Hisaw, Frederick L., and Leonard, Samuel L., *Am. J. Physiol.*, 1930, xcii, 574.

[1] Epstein, A. A., *Am. J. Med. Sci.*, 1922, clxiii, 167.

[2] Barker, M. Herbert, Kirk, E. J., *New Eng. J. Med.*, 1929, 408.

mapheresis, the gross appearance of the kidneys was quite normal but microscopically, in addition to the cloudy swelling and breaking down of the tubular epithelium, there was fatty infiltration along the basement membrane of the tubules and there were small areas of round cell infiltration in the convoluted portions. An occasional glomerulus showed atrophy together with hyalinization and thickening of the capsule.

Tissue obtained at 2 months showed a still more marked atrophy of the tubules. Large areas of round cell infiltration and a definite connective tissue replacement was seen all through the inner half of the cortical tubular region. Numerous glomeruli showed an increased thickening of the capsule, increased hyalinization and atrophy. Four months showed further atrophy and scar tissue formation. At 6 months, the gross changes were pronounced. The capsule stripped easily but left a roughened and dimpled surface. The cortex was greatly narrowed and it appeared to be marked with grayish-white streaks. Microscopic examination revealed a marked scar tissue replacement in the inner half of the cortical tubular region with bands of scar tissue radiating to the surface producing the dimpling. There was a great increase in the tubular degeneration, fatty infiltration, round cell infiltration and glomerular atrophy over that seen earlier in the process. The blood urea nitrogen was not increased at any time in these animals.

These findings indicate that a secondary contracted kidney may well follow a long standing low proteinemia as a result of tubular atrophy and scar tissue replacement. It would also suggest an explanation of why most so-called nephrosis cases that escape intercurrent infections, die of uremia and at post-mortem show scarred and contracted kidneys.

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The Action of Irradiated Ergosterol on Rats and Chickens.

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It is generally taken for granted that there is a parallelism between rickets, the percentage of ash in the bones, and the concentration of inorganic phosphorus in the blood, and furthermore that factors which prevent or cure rickets are associated with a tendency