this character. In few cases fibrous thickening of the capsules of glomeruli and cystic dilatation of the same were observed as spontaneous lesions similar to certain types of glomerular cysts described by E. C. Dickson in his paper on the "Experimental Production of Chronic Nephritis in Animals by the Use of Uranium Nitrate."[1] These were, however, rare exceptions, whereas in uranium poisoning such glomerular lesions seem to be nearly constant. Large scars or lesions of the blood vessels were not found in any case.

Of the livers two showed extensive necroses, a disease probably familiar to all who handle many guinea pigs. In one case there was a slight cellular infiltration of the periportal connective tissue and in two sufficient new formation of connective tissue to speak of it as an incipient cirrhosis. A condition resembling cirrhosis therefore seems to occur spontaneously in guinea pigs also, but, so far as our observations go, it is quite rare. Heart and aorta were carefully inspected in all cases, but nothing abnormal was noted in any instance.

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Spontaneous nephritis in wild rats.

By **W. OPHÜLS.**

Among the very many rats examined in San Francisco for plague only very few were found that showed evidences of dropsy and of renal disease. One such rat was carefully examined at our laboratory through the courtesy of the U. S. Public Health and Marine Hospital Service. This rat showed a very marked general oedema. The kidneys are small, distinctly granular. The measurements are 26×14×10 mm. The heart is moderately but distinctly enlarged, measuring in the formalin hardened specimen from base to apex—23 mm., the largest transverse diameter is 19 mm. and the largest antero-posterior diameter 14 mm. There are no gross lesions of the aorta. In sections of the kidneys the blood-vessels are found in a normal condition. The glomeruli are also quite normal except a few which show slight fibrous thickening

[1] *Archives of Internal Medicine*, 1909, III., 375.

of capsule and slight cystic dilatation. The epithelium in practically all tubules is very markedly and extensively degenerated, showing granular and fatty degeneration. There are many casts. Large bunches of peculiar unidentified, uncolored needle-shaped crystals are also found in the tubules. Large areas in the sections show collapse of tubules with much cellular infiltration and new formation of cellular fibrous tissue between them. The appearances are those of a chronic parenchymatous nephritis. It is possible that these lesions are the result of one or the other poison, such as arsenic or phosphorus, which were used in destroying rats in this city. In this connection it is noteworthy however how rarely such lesions were observed in spite of the very extensive use of such poisons.

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The stimulation of adrenal secretion by emotional excitement.

By **W. B. CANNON** and **D. DE LA PAZ.**

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Dreyer's demonstration that splanchnic stimulation increased the content of adrenal secretion in blood from the adrenal veins has been confirmed by several observers. Adrenal secretion therefore is under control of the sympathetic system.

Major emotional disturbances indicate the dominance of sympathetic impulses. In the cat, for example, fright causes dilation of the pupils, inhibition of the stomach and intestines, rapid heart, and erection of the hairs of the back and tail. Do not the adrenal glands share in this widespread subjugation of the viscera to sympathetic control?

To try this suggestion the inhibition of contraction in strips of longitudinal intestinal muscle, sensitive to suprarenin 1:20,000,000, was used as a biological test. Blood was obtained from the cat when quiet, and again after the animal was excited by the presence of a barking dog, by introducing, through the femoral vein, into the inferior vena cava to the region of the liver, a small vaselined catheter. The blood thus obtained was defibrinated and applied to the intestinal strip at body temperature.