

March 4. Animal developed distemper and died.

Autopsy: Bronchopneumonia. No peritonitis. The aortic band is in place buried in fibrous tissue. The aorta is patent, standing out well above band, but is much smaller below. The kidneys are probably slightly enlarged, and combined weight 50 gm.; are dark blue in color.

Hyperemia, therefore, caused the appearance of casts in the urine, together with a delayed lactose and iodid output, which rapidly returned to normal.

ERRIC IX.—Weight 7 kg.; had a right-sided nephrectomy and a tight band about the aorta just above its bifurcation, on February 17. On the following three days the animal was in poor condition, showing evidences of peritonitis. The urine output was rather small in amount, the phthalein and iodid normal, lactose delayed and salt poorly excreted. On the 23rd the animal was chloroformed. The autopsy revealed peritonitis and retroperitoneal abscesses. The band was found in place, the aorta enlarged above it. The kidney was dark, purplish-red in color, deeply engorged and weighed 45 gm. The capsule strips readily.

DOG XVIII.—Weight 9 kg.; March 4 had a right-sided nephrectomy performed, the kidney weighing 38.5 gm. A band was placed on the aorta just above its bifurcation, causing marked constriction, and a second band of moderate size was placed about the renal vein at its entrance into the vena cava.

March 5. Animal in good condition exhibiting a polyuria—1,000 c.c. output on 700 c.c. water intake. Urine contains a trace of albumin and a few hyaline casts, but no blood cells. The phthalein output is reduced to 29 per cent. Lactose delayed to seven hours; iodid normal. The salt is excreted poorly in low concentration, .09 per cent., yielding a total of .9 gm. on a 3 gm. intake.

March 6. Polyuria persists—900 c.c. urine on 700 c.c. water intake. Salt concentration low—0.11 per cent.

March 7. Phthalein output normal, 50 per cent. Polyuria 750 c.c. on 700 c.c. intake. Salt concentration is low—0.12 per cent.

March 8. Phthalein normal, lactose delayed—eight hours; iodid seventy-two hours. The fluid excretion was not noted.

March 11. Phthalein normal, 60 per cent. Animal shows signs of distemper developing. Urine contains a trace of albumin, but no casts or blood.

March 13. Animal died with symptoms of distemper. At autopsy the kidney was found intensely congested. Weight 60 gm. Both bands were in place and both vessels patent. An abscess containing about 5 c.c. of pus was found in the region of the aortic band. Some fibrinous peritonitis was also found.

This experiment is of peculiar interest on account of the occurrence of a definite persisting polyuria associated with venous obstruction, which coexists with an excessive amount of blood flowing into the kidney.

CONTROLS

It was considered desirable to see what effect on the renal function was produced by simple unilateral nephrectomy. The first dog, in addition to a right-sided nephrectomy, had the left renal vein isolated from the surrounding tissue just as is done in each of the experiments when the band is applied.

DOG XX.—Weight 6.9 kg.; nephrectomy performed on February 26.

February 27. Phthalein 57 per cent. Iodid eighty hours. Lactose eight hours +. Sodium chlorid excreted in good concentration.