

After about two to three weeks the arterial pressure, as measured by direct intra-arterial puncture of the femoral artery, begins to rise and may reach levels as high as 240 mm Hg mean pressure after a month or two. In some animals the pressure reaches a peak and tends to fall to lower levels, while in others the pressure has remained at high levels for seven months, *e.g.*, as long as the animals have been observed. Application of Cellophane to one kidney causes hypertension, but it is not so extreme as when both kidneys are treated.

At autopsy the kidney is found to be surrounded by a dense hull of tissue (fibroblastic and collagenous) as much as 4 to 5 mm thick. This is readily stripped from the surface of the kidney.

Hypertension produced by this method occurs whether the normal capsule is stripped or not before application of Cellophane. Denervation of the kidneys also does not interfere with its development. Removal of the offending kidney in animals in which hypertension has occurred after applying Cellophane to only one kidney causes the hypertension to disappear if it has not persisted for a long time.

We have not been able to produce hypertension by applying rubber (rubber surgical glove) to the kidneys. Other organs such as the heart, liver and adrenal glands have been enclosed in Cellophane, but it is too early to be certain of the results. In three experiments the pericardium showed signs of developing a constricting envelope, but the animals died before signs of constrictive pericarditis occurred.

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THE SUCCESSFUL TREATMENT OF MENINGO-ENCEPHALITIS, ASSOCIATED WITH CANINE DISTEMPER, WITH SULFANILAMIDE

MENINGO-ENCEPHALITIS associated with canine distemper has been considered for years an incurable disease. The mortality rate reported by veterinarians is from 90 to 100 per cent. Goldberg and Volgenau¹ reported on 73 cases treated at the New York State Veterinary College with one recovery. Our records indicate the rate to be essentially 100 per cent. when the disease is accurately diagnosed.

Canine distemper produced by the virus of Carré can be readily controlled by homologous serum, which has no effect on meningo-encephalitis. Sulfanilamide has little value as a therapeutic agent for distemper, in our own experience and in that of veterinarians generally.

The specific etiological agent for meningo-en-

cephalitis associated with canine distemper is, however, unknown. Some believe that the virus of Carré is responsible, others that it is a bacterial invasion secondary to the virus of Carré and still others that it is due to certain specific bacteria and their toxins. In our work we have been unable to demonstrate any microorganisms in the brain or spinal fluid of dogs affected with meningo-encephalitis associated with canine distemper.

We have used sulfanilamide to treat fourteen dogs suffering from meningo-encephalitis associated with canine distemper. The sulfanilamide was administered in such dosage either by mouth or subcutaneously so that the sulfanilamide blood level was maintained at not less than 15 mgms per cent. Experience has shown that it is desirable to maintain this blood sulfanilamide level and that the administration of the drug should be started in the initial stages of the disease before extensive pathological changes are manifest.

Thirteen of the dogs have made complete recoveries. This is a recovery rate of about 93 per cent. compared to a mortality rate of from 90 to 100 per cent. in dogs not receiving sulfanilamide. There was a marked and rapid clinical improvement which usually took place in from 48 to 96 hours. Dogs with total anorexia started to eat. If the temperature was elevated it returned to normal. In the affected animals there was a lymphocytic leucopenia and a polymorphonuclear leucocytosis. After treatment with sulfanilamide, there was a favorable increase in the lymphocytes and a reduction in the polymorphonuclear leucocytes. The red cell count and the haemoglobin was not altered.

A detailed report of this work will appear later in another journal.

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¹ S. A. Goldberg and R. H. Volgenau, *Cornell Veterinarian*, April, 1925.