count of the complications in form of decubitus, pneumonia, etc., that they were destroyed for humane reasons.

Aside from a slight general icterus and moderately succulent lymph-nodes, and parenchymatous changes in the liver and kidneys no gross anatomical lesions were found at autopsy. The spleen was not enlarged. As a rule the spinal fluid was slightly increased and showed 12 to 30 cells per cmm, mostly lymphocytes and a few leucocytes. The brain and cord were moist and injected.

The most obvious and striking microscopic changes in the brain consisted of hemorrhages around the vessels of the olfactory bulb, brain-stem, medulla and cord. Infiltration of the perivascular sheaths and spaces due to mononuclear and polymorphonuclear cells was variable in intensity. "Cuffing" of the veins and arteries was definite in the advanced cases of the disease. Scattered patches of infiltration in the gray and occasionally in the white matter were common. The distribution of the inflammatory foci differs from that commonly seen in typical Borna disease. Nuclear inclusions of the character described as typical of Borna disease by Joest and Degen were absent. Infiltrations in the lumbar plexus, semilunar and other peripheral ganglia suggest a wide distribution of the virus.

Blood cultures prepared from 10 horses were sterile while the spinal fluid of 11 horses sacrificed or dead on account of encephalomyelitis gave cultures of haemolytic and non-haemolytic streptococci. Certain sections of the brain of a few horses (4 out of 10) contained the same organisms in small numbers. They were non-pathogenic for rabbits and horses on subdural and intravenous inoculation. They were considered secondary invaders without etiologic significance.

Attempts were made to transmit the infection to rabbits by subdural and intracerebral injection of 20 per cent. brain and cord suspensions. The animals failed to manifest definite symptoms. Although moderate febrile reactions of short duration were recorded, the rabbits recovered promptly. Suspensions of the central nervous system of 8 equines sacrificed at different stages of the disease were tested on horses by intra-ocular, intranasal and intracerebral injections and feeding. The brain material from a case in the early stages of the infection produced on intra-ocular injection a fatal malady which was clinically indistinguishable from the San Joaquin Valley disease. Successive passages through horses, monkeys, rabbits, guinea-pigs, rats and mice and reverse transmissions from these animals have as a rule been successful. Clinically as well as anatomically the experimental disease is an acute virus infection identical with the spontaneous equine encephalomyelitis. The infective agent has thus far been demonstrated in the central nervous system by experimental inoculation from two field cases (horses No. 10 and 13). The failures in seven other attempts may be due to the selection of non-susceptible experimental animals, uneven distribution or absence of the virus in the central nervous system of the cases of prolonged duration (autosterilization) or unsuitable administration of the material. For example, the brain suspension of an acute case of encephalomyelitis tested on rabbits, horses and a monkey only produced a mild disease in the latter animal. The serum of this recovered monkey continues to neutralize the virus of horse No. 10.

Recent experiments indicate that the guinea-pig is regularly susceptible for the horse virus and the most suitable animal for an extended study of the disease and its causative agent. In these rodents the disease manifests itself in the form of a febrile reaction, flabbiness of the abdomen, hunched cat pose, salivation, tremors, trotting motions and death in from 4 to 6 days following the intracerebral injection of brain suspensions or filtrates. Not only intracerebral but intranasal instillations of brain emulsions have successfully transmitted the virus to guinea-pigs and rabbits, but not to horses.

The virus survived in one experiment preservation at 4° C. in 50 per cent. neutral glycerine for 12, 21 and 31, but not 105 days, when tested on horses and guinea-pigs. It is filterable through Berkefeld V and N candles and retains its activity in a dilution of 1:1000 although the incubation time may be slightly prolonged.

The nature of the immunity of the horse is unknown. Sera of spontaneously recovered or resistant horses fail to neutralize the virus while the sera of recovered rabbits, guinea-pigs and monkeys may contain antiviral substances.

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