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**HISTOPATHOLOGICAL CHANGES IN THE NERVOUS
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— OBSERVATIONS ON EIGHT AFFECTED FOALS INCLUDING
CASES OF THE EARLIEST-NEONATAL ONSET —**

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The nervous systems of 8 horses (Case Nos. 1~8; 1 d~20 mo of age; No. 1 died of pyo-sepsis, and the others were sacrificed) affected with "Equine Incoordination" were examined histopathologically to elucidate the entity of the disease.

The ages at the onset and the duration of illness in each of the cases were as follows, respectively: immediately (im.) after birth and 1 d in No. 1; im. after birth and 5 d in No. 2; im. after birth and 6 mo in No. 3; 6 mo and 7 d in No. 4; 6 mo and 3.5 mo in No. 5; im. after birth and 10 mo in No. 6; shortly after birth and 11 mo in No. 7; 19 mo and 1 mo in No. 8.

Clinical signs of incoordination were noticed in all of the cases except No. 1. The signs were weakness of the posterior part of the body, posterior swaying and lurching, posterior wobbling, wobbling gait, toe-dragging gait, or inability to rise, etc. Cutaneous hypesthesia (4 cases) and diminished pupillar reflex (4 cases) were also confirmed.

The primary microscopical changes were diffuse leucomyelodegeneration (leucomyelopathy) in the almost entire white substance, extending almost all over the length of the spinal cord, and degeneration of the same kind in the white substance in the limbic areas of the posterior brainstem and in the optic nerve; the degeneration in the spinal cord and optic nerve showed a tendency to be more intensive in their limbic areas. These changes were fresh or relatively fresh. No malacic and parasitic lesions were found in the central nervous system. There were minute eosinophilic cytoplasmic inclusion bodies in the following cells: ependymocytes in the cerebral ventricular system (all of the cases); nerve cells in the central gray substance of the midbrain (Nos. 3~6 & 8); oligodendroglia cells in the spinal white substance (Nos. 1~4, 6 & 7); oligodendroglia cells in the white substance of the medulla (Nos. 2~4); arachnoidal cells in the forebrain (No. 1); Schwann cells in the spinal nerve root (No. 1); nerve cells in the spinal ganglion (Nos. 3 & 6~8); etc.