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LYMPHATIC ORGAN ATROPHY, TELENCEPHALIC ASTROGLIOSIS
AND OPTIC NERVE DEGENERATION
IN A NEONATAL FOAL WITH "HYPOGAMMAGLOBULINEMIA":
PATHO-MORPHOLOGICAL OBSERVATIONS

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A case of "hypogammaglobulinemia" in a ten-day-old half-blood foal, dying of septicemia, was patho-morphologically observed from the systemic point of view.

Atrophy of the lymphatic organs: There occurred destruction and loss of lymphocytes in the thymus, lymphocyte scarceness and lack of the lymph nodules in the lymph nodes, and lymphocyte loss and collagenous fibrosis in the germinal centers of the atrophic lymph nodules.

Dysplasia in the brain: There occurred dysplasia of the left telencephalic giri, hypoplasia of the left posterior diencephalon, hypoplasia of the left ventral part of the mesencephalon and aplasia of the left oculomotorius. Primary fibrous astrogliosis was also observed in the affected telencephalic cortex.

Slight degeneration of the parenchyma and slight proliferation of astroglia in the optic nerves were observed.

DNA-positive inclusion bodies appeared in the following cells: Lymphocytes, epithelial reticulum cells of the thymus, reticulum cells of the splenic lymph nodules, oligoglia of the subcortical white matter of the telencephalon, astroglia of the optic nerves and nerve cells of the trigeminal and spinal ganglia. Ultramicroscopical examinations of these cells revealed minute-particle aggregated structures in the nucleus and /or cytoplasm of the lymphocytes, epithelial reticulum cells, oligoglia and astroglia.

The same structures as mentioned above were also found in cytoplasm of the astroglia in the affected telencephalic cortex.