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**PATHO-MORPHOLOGICAL OBSERVATIONS OF EQUINE  
LEUKEMIA COMPLEX**

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Eleven horses with equine leukemia complex (EL) which had been collected during the past 30 years (1949-1979), were observed patho-morphologically and classified into the following types of the disease.

1) A. Lymphosarcoma in 9 cases: Lymphocytic lymphosarcoma (2 cases), lymphocytic and prolymphocytic lymphosarcoma (3 cases), lymphoblastic lymphosarcoma (1 case), histiolympocytic lymphosarcoma (1 case), histiocytic lymphosarcoma (1 cases) and histioblastic lymphosarcoma (1 case).

B. Stem cell leukemia- 1 case.

C. Myeloid leukemia- 1 case. This was a very rare case.

2) The eleven horses consisted of 3 horses of 2 or 3 of age, 6 of 8 to 17 years, and 2 of unknown age.

3) The nine horses with lymphosarcoma consisted of 6 horses (Case Nos. 1, 3, 4, 5, 8 & 9) with multicentric form, 1 (Case No. 2) with alimentary form, and 2 (Case Nos. 6 & 7) with solitary lymphoma form. Two horses (Case Nos. 4 & 8) with subcutaneous tumors were observed.

4) The most frequently involved organs by EL were the lymph nodes followed by the spleen, kidneys, intestines and liver. The heart, lungs, thymus, skeletal muscle and skin were involved to a lesser degree.

5) It was occasionally difficult to differentiate lymphosarcoma from equine infectious anemia, although in the lymphosarcoma, there was usually a massive invasion of an organ or tissue and displacement of the parenchyma by tumor cells.

6) The ultrastructure of the tumor cells in the histiocytic lymphosarcoma was clarified. In particular, the distribution and structure of the rough surfaced endoplasmic reticulum showed a wide variation. Large vacuoles were often found in the cytoplasm of the tumor cells.

7) No virus particles were observed in the cases examined by electron microscopy.