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Brief Communication

HISTOLOGY OF THE SALIVARY GLAND OF TWO LEUKOTIC CATS

Feline leukemia (leukosis, lymphosarcomatosis) is now known to be caused by a virus (*Jarrett et al.* 1964). The feline leukemia virus antigen has been demonstrated in salivary glands of leukemic cats (*Hardy et al.* 1969, 1970) and according to *Gardner* (1971) the C-type virus particles will replicate in the salivary glands of leukotic cats.

Macroscopic leukemic changes have never been observed in the salivary glands of cats in our routine necropsy material. In the literature on spontaneous feline leukemia we have found description of the leukotic involvement of different organs in 195 cases (*Nielsen & Holzworth* 1953, *Cotchin* 1957, *Holzworth* 1960, *Crighton* 1969). Only in one instance were any leukotic changes of the salivary glands mentioned (*Holzworth*).

When Hardy's report, about the presence of feline leukemia virus in salivary glands was brought to our attention, we decided to investigate whether in macroscopically normal salivary glands any leukotic changes could be histologically detected.

Materials and methods

Between November 21st and February 15th 1971 two male cats (5 resp. 8 years) showing typical leukotic infiltrations in various tissues were necropsied at the Department of Pathology. The salivary glands which appeared macroscopically normal were examined histologically using hematoxylin and eosin staining.

Results

In both cats the salivary glands histologically showed several areas of slight lymphoid cell infiltrations between normal gland tubules (Fig. 1).

Both cats in this study had been clinically ill over a period of seven to ten days, before they were euthanasized. Cat no. 1 was lean and anemic, cat no. 2 had a pancreatic adenoma. The other

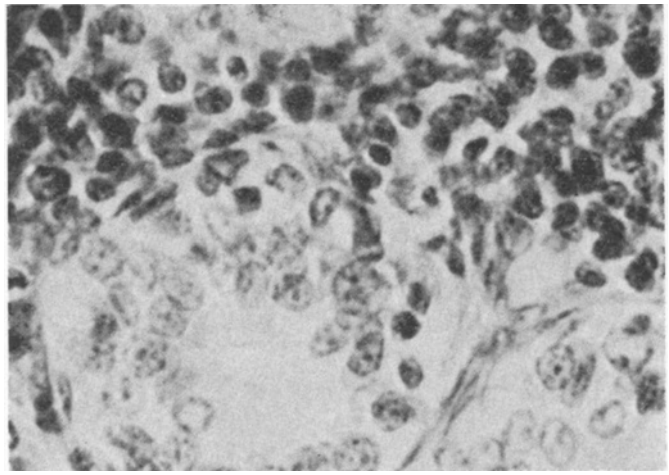

Figure 1. Lymphoid cells in the interstitium of salivary glands of leukotic cat. Note the presence of a few lymphoid cells between the epithelial cells in the tubulus. Hematoxylin-eosin, × 700.

leukotic changes included infiltration in the lymphnodes, in the portal triads of the liver, in the Malpighian corpuscles of the spleen, in the submucosa or subserosa of the intestine, in the myocardium, in the pancreas and in the subcutis.

Discussion

In the literature some feline leukemia clusters have been reported and a horizontal transmission of feline leukemia virus has to be taken into consideration (*Dorn et al.* 1967, *Brodey* 1971). The feline leukemia virus will replicate in vitro in tissues derived from feline embryos but also in cell cultures derived from human tissues (*Jarrett et al.* 1969) As pointed out this might be an important clue in searching explanations for association between leukemia in animals and man.

The two cases of histological leukemic infiltrations in the salivary glands of cat suggest that the salivary glands could be one of the sites for leukosis virus multiplication. Provided that a larger material will show the involvement of the salivary gland to be a frequent phenomenon in cat leukosis, this finding might indicate that salivary glands are a potential source of virus in transmission of feline leukemia through bites and scratches to a susceptible host.

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