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DEPRESSION OF HEMATOPOIESIS IN CATS
EXPERIMENTALLY INFECTED WITH FELINE LEUKEMIA
VIRUS AND FELINE IMMUNODEFICIENCY VIRUS

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Hematological changes in cats experimentally infected with feline leukemia virus (FeLV) and feline immunodeficiency virus (FIV) were investigated.

Three experimental cats (group A) were inoculated intravenously with blood from a cat naturally infected with FeLV and FIV. Two experimental cats (group B) were inoculated intravenously with blood from a cat experimentally infected with the FL-74 strain of FeLV and FIV. In addition, 2 cats were experimentally infected with the FL-74 strain of FeLV (group C).

In group A, cats developed moderate neutropenia associated with anemia after inoculation with the infected blood. In these cats the burst forming unit erythroid (BFU-E) number was greatly decreased on day 56. The colony forming unit granulocyte-macrophage (CFU-GM) number was also decreased on day 56. In contrast, group B and C cats showed no hematological abnormalities.

In group A cats, high activities of both Mg^{2+} and Mn^{2+} -dependent reverse transcriptase were detected in the supernatant of bone marrow culture. Both FeLV and FIV antigens were also found in incubated bone marrow cells from these cats. In group B and C cats, neither RT activity nor antigens of FeLV and FIV were shown in bone marrow cultures.

These results suggest that FeLV and FIV might have potentiated each other in the pathogenesis in group A cats, resulting in severe depression of hematopoiesis.