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Author(s)	HAMADA, Jun-ichi
Citation	Japanese Journal of Veterinary Research, 31(2), 85-85
Issue Date	1983-05-13
Doc URL	https://hdl.handle.net/2115/2283
Type	departmental bulletin paper
File Information	KJ00002374110.pdf



PATHOLOGICAL INVESTIGATION ON HETEROTRANSPLANTATION
OF BOVINE LEUKEMIA CELL LINE (FLK) AND TUMOR
CELLS DERIVED FROM SKIN FORM OF BOVINE LYMPHOSARCOMA (SLS)
IN NUDE MICE

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Transplanted tumors and their chronological changes after inoculation of bovine leukemia cell line (FLK) and tumor cells derived from the skin form of bovine lymphosarcoma (SLS) were observed patho-morphologically in nude mice.

In order to examine the effect of tumor growth by natural killer (NK) cells, a comparison was made between groups inoculated with anti-asialo GM 1 serum (anti-serum having anti-NK activity) (A-3 & B-3) and non-inoculated controls (A-2 & B-2).

1) Transplanted tumors of FLK cells (A-1) showed nodular tumor growth in the inoculated site, and they were undifferentiated.

2) In chronological observations of the transplanted tumors of FLK cells (A-2), mitoses were observed in tumor cells from 3 days after transplantation and from 3 weeks after transplantation; furthermore, growth rate of the cells was the same as in A-1 group. Leukocytic cell reaction was the highest at 12~24 hours after transplantation, and then it became lowered gradually. On the contrary, fibroblastic proliferation gradually increased from 24 hours after transplantation.

3) In the transplanted tumors of FLK cells, incidence of fluorescent BLV-particles was not always present, even though BLV-antigen was detected.

4) Transplanted tumors (B-1) of SLS tumor cells were morphologically lymphosarcoma, and their metastatic foci were found in the liver, spleen, kidneys, lungs and lymph nodes (hematogenous and lymphogenous spread).

5) In chronological observations of the transplanted tumors of SLS tumor cells (B-2), degenerated tumor cells increased with the lapse of time and finally were replaced by fibroblasts.

6) Concerning the morphological changes and growth rate of tumor cells, there were no differences between groups inoculated with anti-asialo GM 1 serum (A-3 & B-3) and the non-inoculated controls (A-2 & B-2).