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Title	EXPERIMENTAL STUDIES ON BLOOD TRANSFUSION INTO DOGS BLOOD GROUPS AND CLINICAL AND HEMATOLOGICAL FINDINGS ON TRANSFUSION USING ERYTHROCYTES
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collected in Biei district near Mt. Tokachi in the central area. The antibody titer was 1:10 to Negishi, but was not tested to other flaviviruses.

**EXPERIMENTAL STUDIES ON BLOOD TRANSFUSION INTO  
DOGS BLOOD GROUPS  
AND  
CLINICAL AND HEMATOLOGICAL FINDINGS ON  
TRANSFUSION USING ERYTHROCYTES**

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The blood groups in dogs were studied to make a basic investigation of the clinical blood transfusion in dogs. Immune antibodies were produced in dogs and goats by repeated infusions of canine erythrocytes. The blood groups of one hundred thirty-six random mongrel dogs caught in Sapporo were examined.

Furthermore, for the purpose of observing the clinical and hematological findings produced in dogs by the transfusion of incompatible erythrocytes, a 45% suspension of canine compatible or incompatible erythrocytes in physiological saline solution was transfused into dogs twice at 10-day intervals. The amount of cell suspension transfused was equivalent to 15 percent of the total blood volume.

The following results were obtained :

1) Four types of antibodies obtained from the dogs were tentatively designated as anti-S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, and S<sub>4</sub>. One type of antibody obtained from a goat was tentatively designated as anti-Sg.

2) The incidence of antigens S<sub>1</sub> through Sg among the 136 dogs was as follows: antigen-S<sub>1</sub> 72.1% ; S<sub>2</sub> 41.2% ; S<sub>3</sub> 22.8% ; S<sub>4</sub> 69.9% ; and Sg 48.5%.

3) The incidence of combinations of blood group antigens was as follows: 12.5% of all of the examined dogs had none of these 5 blood typing antigens; 17.0% had only one antigen; 17.6% had two antigens; 19.1% had three antigens; 24.2% had four antigens; and 9.6% had all of these antigens.

4) Twenty kinds of combinations were observed in these 136 dogs. The highest frequency was 19.8% observed in the combination S<sub>1</sub> S<sub>2</sub> S<sub>4</sub> Sg, and the lowest frequency was 0.7% observed in the combination S<sub>1</sub> Sg, S<sub>1</sub> S<sub>2</sub>, S<sub>3</sub> S<sub>4</sub> Sg, and S<sub>1</sub> S<sub>3</sub> S<sub>4</sub> Sg.

5) After the first transfusion, there was no difference between the compatible and incompatible erythrocytes transfusion in the clinical findings. After the second transfusion, however, one fifth of the dogs transfused with the incompatible erythrocytes showed clinical findings of intensive shock.