



Title	EXPERIMENTAL STUDIES ON INTESTINAL OBSTRUCTION IN DOGS : CLINICAL AND HEMATOLOGICAL FINDINGS ON INFUSION OF RINGER'S SOLUTION WITH RELIEF OF LOW INTESTINAL OBSTRUCTION
Author(s)	YASUI, Tadashi
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**EXPERIMENTAL STUDIES ON INTESTINAL OBSTRUCTION IN DOGS :  
CLINICAL AND HEMATOLOGICAL FINDINGS ON INFUSION  
OF RINGER'S SOLUTION WITH RELIEF  
OF LOW INTESTINAL OBSTRUCTION**

Tadashi YASUI

*Department of Veterinary Surgery  
Faculty of Veterinary Medicine  
Hokkaido University, Sapporo 060, Japan*

The present study was undertaken to obtain clinical and hematological information about the influences of infusing Ringer's solution as a replacement therapy with surgical treatment to low intestinal obstruction in dogs. For this purpose, experiments were carried out using 6 healthy dogs. Experimental obstruction was established by severing the small intestine about 30 cm above the end portion of the ileum. From 4 to 10 days after the obstruction, the animals were given 96-364 ml/kg/days of Ringer's solution (up to 200 ml/kg intravenously and more subcutaneously) in proportion to the loss of body weight. After five infusions the obstruction was relieved by side-to-side anastomosis. The following results were obtained.

- 1) Vomiting and deterioration of the dogs' general conditions, a decrease in plasma sodium and plasma chlorine, an increase in plasma  $\text{HCO}_3^-$ , and a rise in whole blood pH were observed after the obstruction.
- 2) A marked decrease in urine sodium and chlorine and an increase in urine potassium were observed after the obstruction.
- 3) In the cases recognized, rapid deterioration of general condition and an increase in BUN were observed.
- 4) The above-mentioned changes general conditions showed a tendency to return to normal conditions with the infusion of Ringer's solution, indicating that the replacement therapy in this study was effective as a preoperative treatment for low intestinal obstruction.
- 5) After relief, various degrees of loose passage and acidosis or acidemia were observed. In the cases shown, severe diarrhea and a decrease in plasma potassium were observed.