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in the unrecycled perfusate.

2) Stimulation of the non-adrenergic inhibitory nerves did not cause an increase of any of these compounds in the perfused solution, recycled or not.

3) Hypoxanthine and inosine increased when the nutrient medium containing ATP was perfused continually for thirty minutes.

4) Any detectable material changes could not be seen by this analytical method when blood was added to the nutrient medium, through the vasculature.

From these results, no evidence could be obtained which would support the hypothesis that ATP is the non-adrenergic inhibitory neurotransmitter substance.

EXPERIMENTAL STUDIES ON INTESTINAL OBSTRUCTION IN DOGS: ITS CLINICAL AND HEMATOLOGICAL FINDINGS ON ILEUM OBSTRUCTION

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In order to obtain basic data for clinical application to the intestinal obstruction in dogs, clinical and hematological examinations were carried out using 5 healthy dogs. The animals were about 40 to 50 weeks of age and both sexes were used. Experimental obstruction was established by severing the end portion of the ileum. The following results were obtained.

1) The survival periods were 7, 8 and 15 days in 3 dogs which showed remarkable vomiting, and were 26 and 28 days in 2 dogs which showed only slight vomiting.

2) The following three manifestive stages are distinguished according to the clinical and hematological findings: i) The early stage (General conditions were good and hemoconcentration was observed); ii) The intermediately stage (General conditions deteriorated being associated with dehydration); iii) The last stage (The animals showed the symptom like exhaustion, and increase in BUN was observed).

3) Decrease in plasma chloride, increase in plasma CO₂ content and rise of whole blood pH were observed. These suggested that hypochloremic or metabolic alkalosis was assured, and it may be due to the depletion of digestive juice caused by vomiting.