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**STUDIES ON LAMINITIS IN THE RACEHORSE :
CLINICAL ASPECTS AND RELATIONSHIP BETWEEN CHEMICAL
COMPOSITION AND HISTOPATHOLOGICAL FINDINGS
OF AFFECTED HOOFS**

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An investigation was undertaken to clarify the clinical aspects of laminitis and the relationship between the chemical composition and histopathological findings of the affected hoof.

1) Clinical aspects

a) The horses affected with laminitis were divided into three groups, progressive, convalescent, and serious, according to the clinical and hematological findings. X-ray examinations were essential for classifying these groups and judging the course of the disease. b) In the chemical test of blood in these cases of laminitis, significant changes were noticed in the WBC, the N/L ratio, the S-LDH, the total bilirubin, the values of albumin and β - or γ -globulin, and the A/G ratio. These changes were reliable criteria for judging the course of the disease.

2) Biochemical findings

The chemical composition was studied in the outer and the inner layers of the hoof. The results revealed that the chemical composition of the inner layer of the hoof affected with laminitis was almost the same as that of the outer layer of a normal hoof. It was assumed that the inner layer was composed of slightly soft, keratinized tissue.

3) Histopathological findings

The laminar layers were mainly examined histopathologically. The following characteristics were observed: a) marked irregular, heavy growths of epithelial cells in the epidermal laminae; hydropic degeneration in the epithelial cells; non-formative, incompletely formative, or degenerative onychogenic fibrils; and the appearance of keratohyalin; b) edema in the primary and secondary dermal laminae and laminar corium, dilatation of the capillary and venous blood vessels, and edema of the nerve bundles; c) digital

nerves, including vascular nerves, frequently developed edema and/or multifocal loss of nerve fibers in the nerve bundles.

It was assumed that the thickening of the hoof wall affected with laminitis was caused by of a chronic disturbance in the circulating system.

STUDIES ON THE MECHANISM OF ANEMIA IN FELINE HAEMOBARTONELLOSIS

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Original reports of this thesis appeared in "Japanese Journal of Veterinary Science" Vol. **37**, 49-54, 209-211 and 461-464 (1975), Vol. **40**, 141-146 and 203-205 (1978) and in "American Journal of Veterinary Research" Vol. **40**, 691-695 (1979).

NUTRITIONAL STUDY ON THE UTILIZATION OF THE INTESTINAL MICROBIAL AMINO ACIDS, DIETARY UREA AND DI-AMMONIUM CITRATE IN YOUNG PIGS

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