



HOKKAIDO UNIVERSITY

Title	ANALYSIS OF FLUCTUATIONS OF THE SKIN TEMPERATURE OF FOWL
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kinds of neoplastic growths having concurrent character (eosinophilic inclusion bodies, which showed DNA- and RNA-positive results, were found in the cytoplasm of tumor cells of adenocarcinoma, transitional cell carcinoma and haemangio-endothelioma in three cases. These inclusion bodies were regarded as a representation of metabolic changes of the tumor cells); oedematous loosening and swelling of the wall of the blood vessels; perivascular oedema, and perivascular halo-like loosening; oedema and haemorrhages in the tunica propria and tela submucosa; ulceration; hydropic degeneration of the smooth muscles; multiple severe degenerative changes, which were usually of old character, in the intramural nervous plexus (including the vascular nerves) and the nerves innervating the urinary bladder; appearance of mast cells; cystitis simplex; etc.

The following morpho-pathogenetical discussions were attempted: It may be considered that the neural lesions have essentially a primary character. There is a possibility that various changes in the urinary bladders, except the neoplastic growths, are due to close participation of neurogenic influences; it may be possible that haematuria of the disease, except haemorrhages due to neoplastic changes, results essentially from neurogenic haemorrhages.

3) Some morphologically interesting facts were described on the development of the neoplastic growths which were observed in the urinary bladder of all cases.

4) Six cases bore neoplastic growths having the character of primary multiplicity.

Hokkaido University granted the degree of Master of Veterinary Medicine to the following 9 graduates of the Post-Graduate School on March 25, 1967. The authors' summaries of their theses are as follows:

ANALYSIS OF FLUCTUATIONS OF THE SKIN TEMPERATURE OF FOWL

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(Summary of Masters thesis written under direction of Dr. K. HONMA)

Skin temperatures of comb, wattle, wing tip and foot of fowl were measured under constant conditions at constant ambient of between 5 and 30°C. The O₂ consumption was measured simultaneously; for comparison O₂ consumption was

also measured with rabbits. The responses of these skin temperatures were consequently categorized into two types, as previously done by HONMA et al. The comb, with the greatest fluctuations at medium ambient temperatures, belongs to type 1; wattle and wing tip, with the largest fluctuations both at lower and medium ambient temperatures, belong to type 3.

The fluctuations (with magnitudes of 0.5 to 28°C) were then analyzed as follows :

1) The frequency of the fluctuations at the comb was highest at about 20°C (medium range of temperatures) and decreased both toward lower and higher temperatures. The frequency of the fluctuations at wattle, wing tip and foot was high at nearly all temperatures, that at wattle and wing tip in particular was about twice the maximum value at the comb, that at the foot was intermediate, i. e. between the frequencies at the foot on the one hand and at wattle and wing tip on the other.

2) Wave length and amplitude of the fluctuations differed in appearance 1) comb, 2) foot, 3) wattle and wing tip. One should conclude, therefore, that the skin temperature at the foot does not belong to the same type as that at any of the other spots.

In rabbits the O₂ consumption was approximately the same over the entire temperature range. In fowl it was higher at the lower the temperature. The skin temperature of fowl is thus probably less well regulated than that of rabbits when the environmental temperature is low.

THE HISTOLOGICAL CHANGES OF THE UTERINE VEINS OF MULTIPAROUS COWS

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(Summary of Masters thesis written under direction of Dr. N. KUDO)

The uterine veins were observed in 24 cows, 8 nulliparous and 16 multiparous, histologically. The results may be summarised as follows.

1) The intimal thickening was observed only in the multiparous cases, but not in the nulliparous cases at all.

2) In the nulliparous cases, the subendothelial elastic fibers took a granular arrangement, and in the multiparous cases, the fibers were intensified in continuity and waving, and more elastic substance appeared around the elastic fibers.