



HOKKAIDO UNIVERSITY

Title	FORMAL PATHOGENESIS OF HAEMATURIA VESICALIS BOVIS : NEUROPATHOLOGICAL INVESTIGATION
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medulla oblongata. The reflex potentials due to activation of the autonomic fibers, which proceed in the abdominal vagus nerve, were abolished by a sagittal section in the midline to a depth of 1.5 mm from the dorsal surface in this area.

3) The reflex potentials due to the stimulation of the sciatic nerve were augmented by strychnine (100 μ g/kg i. v.) and reduced by mephenesin (50 mg/kg i. v.). After intravenous administration of pentobarbital (15 mg/kg), the reflex potentials evoked by the stimulation of the vagus, great splanchnic or sciatic nerve were reduced or abolished. By injection of GABA (200 mg/kg i. v.) the potentials related to the activation of autonomic fibers in the abdominal vagus nerve were depressed, while other potentials were not affected. No consistent effects were observed by hexamethonium (15 mg/kg i. v.) administration.

Hokkaido University granted the degree of Doctor of Veterinary Medicine to the following graduate of the Post-Graduate School on March 25, 1967. The author's summary of his thesis is as follows :

FORMAL PATHOGENESIS OF HAEMATURIA VESICALIS BOVIS

— NEUROPATHOLOGICAL INVESTIGATION —

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(Summary of Doctors thesis written under direction of Dr. Y. FUJIMOTO)

Nine naturally occurring cases (Holstein-Friesian cows, 3~12 years of age) of haematuria vesicalis bovis were investigated histopathologically from the general viewpoints and with special consideration of neuropathology.

1) It may be considered that true pathological character of the present disease is a systemic polyneuropathy in which organic changes in the autonomic nerves innervating the urinary bladder (disturbances of the autonomic nerves) are especially noticeable. The lesions in the nerves were usually old, and their quantitative severity had almost nothing to do with the extent of neoplastic growths in the urinary bladder, anaemia, cachexia or other disorders.

It may be possible that haematuria vesicalis bovis is not only disease of the urinary bladder, but also a systemic disease.

2) The common findings in the urinary bladder were as follows: Various

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