HOKKAIDO UNIVERSITY

Title	DISTRIBUTION OF ANTIBODIES AGAINST INFLUENZA VIRUSES A, B, AND C IN ANIMALS
Author(s)	ONTA, Tokio
Citation	Japanese Journal of Veterinary Research, 26(1-2), 36-37
Issue Date	1978-04
Doc URL	http://hdl.handle.net/2115/2141
Type	bulletin (article)
File Information	KJ00003407855.pdf

Instructions for use

Hokkaido University Collection of Scholarly and Academic Papers : HUSCAP

CIRCUMOVAL AND MICRO-PRECIPITATION REACTIONS ON LIVING SPECIMENS OF *ANGIOSTRONGYLUS CANTONENSIS*

Yuzaburo OKU

Department of Parasitology
Faculty of Veterinary Medicine
Hokkaido University, Sapporo 060, Japan

Positive circumoval and micro-precipitation reactions on living *A. cantonensis* at various developmental stages were recognized after incubation at 34°C for 24 hr using sera heated at 56°C for 30 min and unheated sera from *Angiostrongylus cantonensis*-infected or -transferred rats and hyper-immunized guinea pigs. The characteristic precipitates were mainly formed at the excretory pore and cuticle of the 3rd stage larvae; the oral opening, excretory pore and cuticle of the 4th stage larvae; and the vulva, anus, cloaca, oral opening, excretory pore and cuticle of immature adults. The precipitates, however, were not formed in the 1st stage larvae. The precipitates began to appear 1 to 4 weeks after infection. These reactions were recognized irrespective of sex and developmental stage of the worm. Positive cross-reactions were observed in sera from *A. costaricensis*-infected rats, but not in the sera from *Trichinella spiralis*-infected rats. Applying a technique of immunofluorescence, it was shown that immunoglobulins were specifically incorporated into the precipitates. The results of these reactions were compared with those of indirect hemagglutination and double diffusion tests. The efficiency of the microprecipitation test was noted for immunodiagnosis of angiostrongyliasis.

DISTRIBUTION OF ANTIBODIES AGAINST INFLUENZA VIRUSES A, B, AND C IN ANIMALS

Tokio ONTA

Department of Hygiene and Microbiology
Faculty of Veterinary Medicine
Hokkaieo University, Sapporo 060, Japan

The sera from selected animals found chiefly in Hokkaido were studied using the hemagglutination-inhibition (HI) tests for the presence of antibodies against influenza viruses A (15 subtypes), B, and C. The following animals were used: horses, cows, swine, cats, minks, and rats. All sera were treated with RDE

before the screening tests. The sera positive at 1 : 32 serum dilution in the screening tests were further treated with trypsin, heated at 56 °C for 30 min with KIO_4, and tested. An HI titer of 1 : 32 or higher was considered to be positive.

The distribution of antibodies in the subtypes of influenza A virus were as follows: of 504 horses, including 233 which were inoculated with horse influenza vaccine, as many as 51% were positive against H 3. Eighteen, or 7% of the horses, were positive against Heq 1 and Heq 2 (possibly due to the vaccination), and 0.4, 0.2, 6, 0.4, and 0.6% were positive against H 0, H 1, Hav 1, Hav 3, and H 3, respectively. None were positive to the remaining subtypes. Of 728 cows, 1.5 and 1% were positive against H 0 and H 3, respectively. None were positive to the remaining subtypes. Of 1026 swine, 6.2% were positive against Hsw 1. It was observed that the positive swine were born exclusively after 1977. Positive sera were also found in 4.3, 0.4, 1.4, and 0.1% of swine against H 0, H 1, H 3, and and Heq 1, respectively. Of 52 cats, 5.8% were posive against H 3. Of 62 minks, 16 and 1.6% were positive against H 3 and Hsw 1, respectively.

Antibodies to influenza B virus were found in 3.2% of the horses and in 0.1% of the swine, respectively. It is significant that the positive horses were born exclusively in 1976.

Antibodies to influenza C virus were found in 79% of the rats. This fact suggests that infection of influenza C virus may be unexpectedly prevalent in rats.

A SUPPLEMENT TO CHANGES OF THE NERVOUS SYSTEM IN "EQUINE INCOORDINATION"

Keigo SAITO

Department of Comparative Pathology
Faculty of Veterinary Medicine
Hokkaido University, Sapporo 060, Japan

The nervous systems of 27 young thoroughbred horses (7–20 months of age; duration of illness, 1～11 months) affected with "Equine Incoordination" were histopathologically investigated to make a supplement to SAKURA's (1977) observations on 8 foals.

The clinical signs of the disease were lumbar weakness, posterior swaying and weaving, posterior wobbling, toe-dragging in gait, walking with the sidewardly open hindlegs, grounding bump the foot in gait, stringhaltlike walking, falling by turning from side to side, flattening of the upper gluteal region, diminished tail resistance, cutaneous hypesthesia, and diminished pupillary reflex.