invasiveness and composed of myoepithelial cells and epithelial cells. The cells were pleomorphic. The myoepithelial cells had abundant intercellular mucoid substances. It was difficult to diagnose between complex carcinoma and mucinous carcinoma due to abundant mucinous material. They have similar feature in microscopic examination Samples were examined (1)histochemically PAS, and alcian blue(pH 2 5) and (2)immunohistochemically for cytokeratin 19, vimentin, smooth muscle actin The cases showed PAS negativity, alcianophilia pH 2.5 positivity, vimentin and smooth muscle positivity, and cytokeratin 19 negativity. Thus, it is classified mammary complex carcinoma in mucinous stage.

Corresponding author :
Soon-Seek Yoon 031-467-1756,
E-mail· yoonss24@hotmail.com

P#14

Pathological Findings in Java Sparrow Inoculated with Newcastle Disease Virus

Young-Oh Gu, Young-Bae Jin, Soon-Bok Kim
Veterinary pathology, College of Veterinary Medicine, Gyeongsang National University, Jinju, Republic of Korea

The present study was conducted to determine the pathogenicity of Newcastle disease virus (NDV; Kyojeongwon strain), and the distributions of viral antigens and genes and in experimentally infected Java sparrows (*Lonchura oryzivora*).

Tissue samples were collected on 2, 6, 7, 8, 9, 10 and 11 days postinoculation (dpi) for histopathology, immunohistochemistry (IHC) and RT-PCR.

13 cases out of the 15 inoculated birds showed nervous symptoms with 100% of mortality, and hemorrhages in the visceral organs were often observed. Microscopically, perivascular round cell infiltration in the cerebellum is observed on 6 dpi, and hemorrhages and necrosis were observed in the bursa of Fabricius, thymus, spleen and proventriculus. IHC positive signals were found in the epithelium of the cerebellar vasculars, bursa of Fabricius, spleen, thymus and proventriculus.

Using RT-PCR, viral genes were detected in the cerebellum on 6 dpi and in the cerebrum on 10 dpi

These results suggested that Java sparrow is highly susceptible to NDV Kyojeongwon strain.

Corresponding author : Soon-Bok Kim
(055-751-5816, e-mail : sbk@gsnu.ac.kr)

P#15

Immunohistochemistry and RT-PCR for Pathogenesis of Newcastle Disease in Chickens

Min-Kwon Lee[(1)], Young-Bea Jin[(3)], Oun-Kyeong Moon[(2)] and Son-Bok Kim[(3)]
[(1)]Kyongnam Livestock Promotion Institute, Jinju, Republic of Korea, [(2)]National Veterinary Research and Quarantine Service, Anyang, Republic of

Korea and [3]Veterinary pathology, College of Veterinary Medicine, Gyeongsang National University, Jinju, Republic of Korea

The present experiment was carried out to study the pathogenesis of Newcastle disease, Newcastle disease virus (NDV) antigens and genes were detected in various organs from NDV inoculated chickens by RT-PCR and immunohistochemistry.

At 48 hpi, clinical findings of the affected chickens were open-mouth breathing, conjunctivitis, watery diarrhea and edema around the eye and neck. At 72 hpi, chickens showed muscular tremor, paralysis of the legs and wings, and coma.

Histopathological results consist of multi-focal necrosis with hemorrhages in lymphoid aggregates of the intestinal tracts, necrosis of the lymphoid tissues, neuronal degeneration and necrosis, and perivascular cuffing.

Using RT-PCR, virus genes were detected in the spleen and proventriculus at 48 hpi, and in the brain at 60 hpi. Immunohistochemically, NDV antigens were localized mainly in the cytoplasm of lymphocytes and macrophages. Virus antigens were detected in the spleen, thymus, cecal tonsil, proventriculus, trachea and lungs at 12 hours post- inoculation (hpi). Those results indicated, Kyojeongwon virus was replicated and spreading may be performed within 12 hpi.

Corresponding author : Soon-Bok Kim
(055-751-5816, e-mail : sbk@gsnu.ac.kr)

P#16

Pathological Findings on Xenograft of Fibrosarcoma in Nude Mice Preinjected with Newcastle Disease Virus

Ki-Sik Chang and Soon-Bok Kim
Veterinary pathology, College of Veterinary Medicine, Gyeongsang National University, Jinju, Republic of Korea

This research focuses on how Newcastle Disease Virus (NDV) preinjected group of NDV affects the occurrence of tumor and its mechanism. Fibrosarcoma cells were grafted on female athymic BALB/c(nude) mice in order to observe the effects. The growth rate, microscopic change, distribution of TNF-α in tumor tissues, and apoptosis by using TUNEL stain were observed. At the same time, by using ELISA, the blood concentration of TNF-α was comparatively measured. As a result of the experiment, in comparison to the control group, gross observation of the occurrence of tumor in NDV preinjected groups were made 20 days after.

Histological test indicated that the NDV preinjected group, unlike the control group, cell degradation and necrotic degeneration as well as inhibition of cell proliferation were observed.

Immunohistochemistry indicated that, unlike the control group, there was a significant increase of the positive result of TNF-α and apoptosis in the tumor tissue section of NDV preinjected group. ELISA also indicated higher blood concentration of TNF-α in NDV preinjected group than the