followed by *Pasteurella multocida*. In conclusion, pathological data of the present study indicated that PCV2 infection has been enzootic in Korea since 1995.

Corresponding author :
Young-Hwa Jean 031-467-1870,
E-mail : jean@nvrqs.go.kr

P#12

Prevalence of Bovine Teat Papilloma in Korea

You-Chan Bae[1], Soon-Seek Yoon[1], Jong-Hyeon Park[1], Kyoung-O Cho[2] and Mun-Il Kang[2]

[1]Division of pathology, National Veterinary Research and Quarantine Service, Anyang, Republic of Korea and [2]College of Veterinary Medicine, Chonnam National University, Gwangju, Republic of Korea

Teats of 880 cows were examined to investigate the prevalence of bovine papilloma Among them, 49% (432) to be examined were Hosteins, whereas the rest were Korean-natives. Based on gross and histopathological examination, the prevalence of bovine papilloma were 33 6% (296/880). Strikingly, the prevalence of papilloma in Holsteins (263/432) was 8 times higher than that in Korean-natives. Histopathologically, teat papilloma exhibited various degree of hyperkeratosis, severe hyperplasia of granular and prickle cell layers, and large, irregular, keratohyaline granules in granular cells. Immunohistochemically, bovine papilloma virus (BPV) antigen was scattered in the nuclei of degenerated granular and cornified cells. Twenty-three percent of papilloma in Holsteins were positive for BPV by immunohistochemistry (IHC). Electron microscopically, BPV particles were found in 39.2% out of papillomas in Holsteins. The low detection rate of BPV by IHC and electron microscopy might be attributable to that the number of BPV particles or amount of its antigen were very low in the cells. Moreover, PCR assay was developed using one primer pair to detect any BPV type. BPV DNA was amplified in 71.4% out of Holstein teat papilloma in PCR, whereas 21.4% out of Korean-native teat papilloma was positive. From these results, we confirmed that bovine papilloma in teat was prevalent in Korea.

Corresponding author :
You-Chan Bae 031-467-1747,
E-mail · baeyc@nvrqs.go.kr

P#13

Mammary Complex Carcinoma in Mucinous Stage: Case Report

Kyung-Hyun Lee, Soon-Seek Yoon, Jae-Won Byun, Young-Hwa Jean and O-Soo Lee

Division of Pathology, National Veterinary Research and Quarantine Service, Anyang, Republic of Korea

A 15 years old female mogrel dog was refered to a local animal clinic with 7×5×4 mass in right 5th mammary gland. The veterinarian did the biopsy and sent to our laboratory. Grossly, the tumor was lobulated. Microscopic examination of tumor showed

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