

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

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Prevalence of Bovine Teat Papilloma in Korea

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Teats of 880 cows were examined to investigate the prevalence of bovine papilloma. Among them, 49% (432) to be examined were Holsteins, 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.

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Mammary Complex Carcinoma in Mucinous Stage: Case Report

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A 15 years old female mongrel dog was referred 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