

GROSS AND HISTOPATHOLOGICAL STUDIES OF PORCINE CIRCOVIRUS DISEASE (PCVD) IN PIGS IN PERAK AND SELANGOR

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ABSTRACT

Porcine Circovirus Disease (PCVD) formerly known Post-weaning multisystemic wasting syndrome (PMWS) in pigs was first reported in Canada in 1991. The disease has since been spread and has been reported in most if not all pig producing countries in the world. PCVD mostly affects weaned pigs and is characterized by progressive weight loss, respiratory distress, high post-weaning mortality, skin lesions and in recently more reports of reproductive disorder. Porcine circovirus type 2 (PCV2) has been identified as the infectious agent of PCVD. In Malaysia, PCV2 was first isolated in 2004 and the condition was described in 2007. The objective of this study was to describe gross and histopathological changes in PCVD infected pigs in Malaysia. Fifteen post-weaned pigs of 6-10 weeks of age which showed pallor, wasting and dyspnoea were selected from five farms where clinical PCVD and PCV2 were detected by polymerase chain reaction (PCR). The prominent gross findings on necropsy were significantly enlarged inguinal and mesentric lymph nodes, wasting and anasarca. Cranioventral pulmonary consolidation was common. PCV2 antigens and nucleic acid were detected in all the samples by nested PCR. The most consistent microscopic lesion was varying degrees of lymphoid depletion and progressive multifocal to diffuse infiltration of lymphoid tissue by macrophages. Other non-lymphoid lesions included interstitial pneumonia, bronchopneumonia, cholangiohepatitis, Kuppfer cells hyperplasia, glomerulonephritis and interstitial nephritis. The presence of clinical, gross necropsy and the following histopathological findings of lymphoid depletion and diffused infiltration of lymphoid tissues by macrophages are good indicators in PCVD diagnosis, in the absence of demonstration of PCV2 antigens by viral isolation, PCR and immunohistochemistry

Keywords: Pig, PCV2, PCVD, gross, histopathology, lymphadenopathy, lymphoid depletion,