

COAGULOPATHY AND VIRAL VASCULITIS INDUCED BY PORCINE CIRCOVIRUS TYPE 2 (PCV 2) INFECTION IN SWINES

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Porcine circovirus 2 (PCV2) is a worldwide causal agent of important diseases of swines causing great economic losses and mortality. The clinical findings include diffuse inflammatory lesions and necrosis, thrombosis and petechias. The purpose of this study was to investigate the alterations in the hemostatic system and in blood vessels of PCV2-infected piglets. Infected animals identified by clinical diagnosis and PCR analysis of blood samples have an increase in coagulation ability in comparison with the controls, observed both in the activated partial thromboplastin time (APTT) and in the recalcification time (RT) assays. The platelet blood count decreased in the PCV2 positive group and marked platelet-asymmetry was observed. Histopathological and immunohistochemistry analysis show the presence of the viral agent at the endothelium and viral vasculitis lesions with endothelial cells activation. This is the first report of hemostatic disorders in PCV2 positive piglets. These data show clotting activation associated with vasculitis and platelet alterations, and could be related with disseminated intravascular coagulation syndrome and several clinical findings. The complete understanding of the hemostatic phenomenons in PCV2 infection can be helpful to clear the disease pathogenesis.