20th International Pig Veterinary Society Congress

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We are delighted that the International Pig Veterinary Society Congress 2004, decided to select South Africa as the host country for the 20th IPVS Congress. The Pig Veterinarians of South Africa will ensure that this congress lives up to the best traditions of previous congresses; incorporating an interesting and topical scientific programme, fascinating accompanying persons tours and an excellent social programme, allowing delegates the opportunity to network with their overseas colleagues.

This, the first IPVS congress on the African continent, will undoubtedly be of enormous benefit in generating solutions to the emerging pig veterinary challenges, especially those related to exotic and changing viral diseases, decreased use of antimicrobials and nutritional advances. The congress is important to further pig veterinary science in South Africa, to encourage younger veterinarians to join the pig industry, as a vehicle to generate funds for research and to improve the pig industry in Southern Africa.

South Africa is a magnificent and beautiful country, and offers tourists value for money. Thus, pre and post congress tours will be a major attraction for delegates to come to South Africa. Durban, in KwaZulu Natal, is a vibrant multi-cultured city with magnificent beaches, easily accessible game parks, theme villages and a moderate winter climate making it an ideal tourist destination. We urge our colleagues throughout the world to use this opportunity to get a glimpse of the continent’s rich and fascinating wonders and to enjoy the hospitality of their African friends.

Dr Peter Evans
Chairman: Local Organising Committee: IPVS 2008
CHARACTERIZATION OF INTERSTITIAL NEPHRITIS IN PIGS WITH NATURALLY OCCURRING POSTWEANING MULTISYSTEMIC WASTING SYNDROME

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Introduction
Porcine circovirus type 2 (PCV2) has been etiologically linked with postweaning multisystemic wasting syndrome (PMWS), which is clinically characterized by wasting and respiratory distress, and pathologically defined by its lymphoid lesions, specifically lymphocyte depletion and granulomatous infiltration (1). Many tissues can be damaged in PMWS affected pigs besides the lymphoid ones; one of those is the kidney, in which interstitial nephritis has been described in 40% to 70% of the diseased animals (2, 3).

The objective of the present work was to describe in detail kidney lesions observed in PMWS cases and immunohistochemically characterize the inflammatory infiltrates.

Materials and Methods
A total of 26 cases of interstitial nephritis in PMWS affected pigs were retrospectively selected at the Veterinary Pathology divisions at Universities of Bologna (Italy) and Autonomous of Barcelona (Spain). A detailed histopathological examination of the cases was carried out and an in situ hybridization (ISH) technique to detect PCV2 nucleic acid performed. Immunohistochemical methods to detect MHC class II and lysozyme were used to characterize the inflammatory infiltrates of the cases. Amounts of PCV2 as well as MHC II cells and macrophages (lysozyme) were semi-quantitatively evaluated: negative (-), low (+), moderate (++) and high (+++) amounts.

Results
Results of histological, immunohistochemical and ISH studies are summarized in Table 1. Interstitial nephritis lesions were classified into three groups, following a lympho-plasmacytic tubulo-interstitial [TI] (n=10), lympho-histiocytic to granulomatous [LHG] (n=11), and mixed [M] patterns (n=5). The main location of almost all types of inflammatory infiltrates was the cortico-medullary junction, although extension to medulla and cortex was variably seen. TI lesions were mild to moderate, while LHG and M lesions were moderate to severe in almost all cases.

PCV2 nucleic acid was never observed within glomeruli. Viral genome was mainly located in the cytoplasm and/or nuclei of tubular epithelial cells and cytoplasm of inflammatory cells in all types of inflammation. ISH positivity was also observed in the intratubular desquamated, endothelial and mononuclear intravascular cells. The amount of PCV2 was usually low in TI lesions, while moderate to high in LHG and M lesions.

Numbers of MHC II positive cells were low to moderate in all cases except for 4 cases of granulomatous inflammation (2 with high amount and 2 negative). Lysozyme positive cells were present in moderate to high amount in all cases of LHG and M lesions, while no positive cells were observed in TI cases.

Discussion
The present study further pathologically characterizes the interstitial nephritis lesions that are observed in a proportion of PMWS affected pigs (2). Two main types of lesions were described, which were characterized by the presence of TI and LHG infiltrates; mixed situations were also observed. The former type is usually of low intensity, with low to moderate amount of PCV2 in epithelial tubular cells, lack of lysozyme positive cells and low numbers of PCV2-positive inflammatory cells. LHG and M types were more heterogenic, usually of moderate to severe lesional intensity and lysozyme positive cells, but with very variable numbers of cells with MHC II expression and cells containing PCV2 nucleic acid.

Although a trend was observed, no obvious correlation was established between severity of histological lesions and amount of PCV2 genome, which is, apparently, a different feature of what is usually observed in lymphoid tissues of PMWS affected pigs (2).

References