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

COMPARISON OF METHODS FOR THE SEROLOGICAL ANALYSIS OF PPV-SPECIFIC ANTIBODIES

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Introduction

Porcine parvovirosis is known to be widespread among swine. Clinical manifestations are conception failure, delayed return to oestrus, embryonic and fetal death with resorption, mummification, small litter sizes, stillborn piglets, neonatal death, and abortion (1). Under field conditions the most effective way of preventing PPV-induced economic losses is the vaccination of gilts and sows (2). Two of the most frequently used serological methods for the detection of specific antibodies are the hemagglutination inhibition (HI) and ELISA tests. In this study different test systems were compared concerning their correlation of results.

Materials and Methods

In total, 115 serum samples were analysed by 2 different HI-tests (A and B). Furthermore, the samples were tested by 3 commercially available ELISA tests: Porcine Parvovirus® (Cypress Diagnostics, Belgium; double antibody sandwich assay), Ingezim PPV Compac® (Ingenasa, Madrid, Spain; blocking ELISA), and Ingezim PPV Indirect® (indirect enzymatic immunoassay). Tests were performed and analysed according to the manufacturers' specifications.

Results

90.5 % of the serum samples were concurrently positive or negative in all 5 test systems. 10 of 115 samples did not correlate. The discrepant cases showed no tendency towards distinct combinations. The correlations of the different test systems were expressed as Spearman's coefficient of correlation ρ (Table 1). A classification of HI-test B-results into different titre groups and subsequent analyses of correlations are shown in Table 2.

Discussion

The significant difference between the two HI-test systems (A and B) could have originated primarily from the utilization of two different virus strains. HI-test A was performed with a 20 years old PPV-strain isolated in Great Britain, while HI-test B used a more recently isolated strain from the Netherlands. The correlation among the three ELISA test systems was high as was also the correlation between the Cypress ELISA and the HI-test B (Table 1).

It could be expected that the results of the two Ingezim ELISA kits correlated well. However, there were small differences in test results, which were based on different keys of interpretation of the two systems. While the Ingezim PPV Indirect® just offers the possibility of "positive" or "negative" test results, the Ingezim PPV Compac® also identifies serum samples as "suspicious" for antibodies against PPV. For this reason, a direct comparison of these two methods can only be done with caution.

One of the advantages of HI-test systems is their interpretation as "PPV-antibody titers". This interpretation allows the differentiation between vaccinated and naturally infected animals. While by means of vaccination only titres of maximal 1:256 can be reached, the titres generated through an infection can be much higher. Only the Ingezim PPV Indirect® ELISA system offers also an interpretation key for titre approximation, which allows a classification for PPV-antibody titres from < 1:100 to > 1:3200. It could be shown, that ELISA results correlate well only in the titre group ≤ 1:64. In conclusion, ELISA tests cannot easily replace HI-test in those cases, which request an interpretation on PPV-antibody titres.

Table 1 Correlations of ELISA- and HI-tests according to classification of results as "positive" or "negative" (ρ)

	Ingez. Comp.	**Ingez. Ind.**	**HI-test A**	**HI-test B**
Cypress	0.921	0.914	0.777	0.915
Ingez. Comp.		0.821	0.734	0.748
Ingez. Ind.			0.706	0.733
HI-test A				0.541

Table 2 Correlations of samples sorted according to titres (HI-test B antibody titres were taken as reference)

	Cypr	**Ingez. Comp**	**Ingez. Ind. OD**	**Ingez. Ind. Titres**	**HI-test A**
neg.	- 0,12	- 0,13	- 0,19	- 0,17	- 0,35
≤ 1:64	- 0,53	0,99	0,91	0,87	0,90
1:128 - 1:512	- 0,14	0,26	- 0,28	- 0,12	- 0,37
≥ 1:1280	- 0,66	- 0,18	0,15	0,07	0,42

References

1. Oravainen, J. et al. (2005). Reprod. Dom. Anim. 40, 57-61
2. Paul, P.S. et al. (1986). J. Am. Vet. Med. Assoc. 188, 410-413