PREVALENCE OF ISOLATED BACTERIA IN SWINES PRESENTING THE PORCINE CIRCOVIRUS INFECTION

LE Ristow[1]; AA Perez Jr[1]; PD Mosqueira[1]; MA Reis[1]; M Schürmann[1]
[1] TECSA Laboratories, BELO HORIZONTE, Brazil

Introduction

The wasting syndrome is a multifactorial disease with Circovirus type 2 (PCV2) involvements (1). In spite of the great economic impact of this syndrome and the involvement of opportunist secondary agents, there is the necessity to determine what are the microorganisms more frequently involved with PCV2 in Brazil.

Materials and Methods

It had been studied between March of the year 2006 and March of the year 2007, 46 farms presenting animals with the Porcine Circovirus infection in six States of Brazil (MG, SP, GO, PR, SC, RS). These herds had presented positive animals for PCV2 from inguinal lymphonodes, by the direct immunohistochemistry method according to praised methodology (2). From the same animals, swabs had been collected from organs as brains, lungs, intestines and snout to make isolation and biochemistry identification of the bacteria of these organs. These isolations and biochemistry identifications had been carried through by praised methodology (3). The prevalence of the isolated bacteria in 37 animals was also classified in two types according to the disease manifestation: chronic and acute. The manifestations definition are defined in table 1.

Results

The isolated bacteria and its prevalence are listed in table 2. According to the manifestations and our proposal of classification, 27 animals presented chronic status and 10 animals presented acute status. The prevalence of the isolated bacteria, according to the manifestations, is in Table 3.

Discussion

It is related in other countries that, parallel to the infection with PCV2, there is frequent co-infection with bacteria and virus (1). Our results confirm the great presence of associations with varied involved bacterial agents. The gotten results are important for a bigger knowledge of the Porcine Circovirus infection in our country, of the diversity of associated agents and the necessity of strategic action for each type of involved agent.

References

1. SORDEN S.D. (2000). **Swine Hlth. Prod**. v.8, p.133.
2. ELLIS, J. et al. (1999). **J. Virol. Meth**. v.80, p.123.
3. QUINN, P.J. et al. (1994). **Clin. Vet. Microbio.,** 648p.

Table 1. Association of histopathology and immunohistochemistry with classification of clinical manifestation from Circovirus infection

histopathology	Immunohisto-chemistry	Classification
- No significant alterations	Absence of marking	Negative
- lymphoid follicular absence -Moderate to marked lymphoid depletion - Presence of Giant cells - Histiocytic replacement	Visualization of marking in less than 50% of the field in analysis	Positive, suggesting chronic process
- Mild lymphoid depletion - Rare presence of Giant cells	Visualization of marking above of 50% of the field in analysis	Positive, suggesting acute process.

Table 2. Prevalence of the isolated bacterial agents in herds infected with the PCV2.

Bacteria	%	Bacteria	%
Streptococcus suis	*97,80%*	*E. coli beta hemolytic*	*8,69%*
E. coli gamma hemolytic	*52,17%*	*Clostridium sp*	*4,34%*
Bordetella bronchiseptica	*41,30%*	*E. coli alpha hemolytic*	*2,17%*
Haemophilus parasuis	*28,30%*	*Salmonella sp*	*2,17%*
Pasteurella multocida	*15,20%*		

Table 3. Prevalence of the isolated bacteria in animals infected with PCV2 presenting different manifestations. n. – number of animals.

Manifesta-tion	n.	Isolated bacteria	%
Positive, suggesting acute process	10	*Streptococcus suis*	100%
		E. coli gamma hemolytic	60%
		Bordetella bronchiseptica	40%
		Pasteurella multocida	20%
		Haemophilus parasuis	10%
		E. coli beta hemolytic	10%
Positive, suggesting chronic process	27	*Streptococcus suis*	96,3%
		E. coli gamma hemolytic	51,8%
		Bordetella bronchiseptica	37,0%
		Haemophilus parasuis	29,6%
		Pasteurella multocida	14,8%
		E. coli beta hemolytic	7,4%
		Clostridium sp	7,4%
		E. coli alpha hemolytic	3,7%
		Salmonella sp	3,7%