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TITLE

EFFECTS ON ACUTE PHASE PROTEINS IN IBERIAN BREED PIGLETS OF TWO DIFFERENT CIRCOVIRUS TYPE 2 AND MYCOPLASMA HYOPNEUMONIAE VACCINE PROTOCOLS

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CONTENT

Introduction

Acute Phase Proteins (“Hp” Haptoglobin; “CRP” C-Reactive Protein) have been proposed as suitable biomarkers for monitoring inflammatory response, welfare and may be an indicator of average daily weight gain (ADWG) in swine farms. The objective of this study was to analyze these parameters with two different vaccination protocols.

Materials and Methods

60 Iberian breed piglets were vaccinated at 28 days of age. Group N, (n=31) with 2 mL of FLEXcombo® (1 mL CircoFLEX® and 1 mL MycoFLEX®). Group Z, (n=29) with 0.5 mL of Circovac® and 2 mL of Hyogen. Blood samples, rectal temperature (T^{re}) and the weight of each animal were taken before vaccination, 24h and 48 after vaccination.

Dunn's multiple comparisons test was used for APPs and T^{re}. For ADWG, the ANOVA test was performed.

Results

The administration of both protocols increased concentrations of Hp and CRP in comparison to the basal level. At 24 hours post vaccination, Hp concentration was significantly higher (p<0.01) in group Z. In addition, there was a numerical but not significant difference for the CRP levels in group Z (approximately twice as high). At 24 hours post immunization, the rectal temperature was significantly higher in group Z compared to N (p<0.01). Moreover, at 24 hours post immunization, the ADWG was significantly higher in animals in the group N (p<0.05). Indeed, data show a negative weight gain during that period in group Z.

Conclusion

According to our results, the release of APPs has been significantly higher in piglets vaccinated with the Z protocol. Furthermore, a significant increase of rectal temperature and a lower ADWG was observed in group Z pigs. As described in other studies, vaccination with FLEXcombo® has a minor effect on well-being parameters and induces less stress compared to other vaccines, which is important for growth performance during the nursery period.