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REDUCTION OF THE PREVALENCE OF *BORDETELLA BRONCHISEPTICA* INFECTION IN PIGLETS AFTER SOW VACCINATION

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Introduction

Vaccination is one of the methods used for the prevention of bacterial diseases in domestic animals. Although non-progressive atrophic rhinitis (NPAR) caused by *Bordetella bronchiseptica* (Bb) is endemic in commercial pigs, little information about the effect of NPAR-specific vaccines is available. The aim of this study was to investigate the effect of vaccination on the prevalence of NPAR in a Spanish farm with Bb-associated disease.

Material & Methods

A farrow-to-nursery pig herd was selected and enrolled in a controlled clinical trial. Selection was based on clinical signs and laboratory results showing Bb infection in the nursery. Four pregnant sows were primo-vaccinated with RHINISENG® (V Group), and four received PBS (NV Group). The presence of Bb in nasal secretions was assessed by real-time PCR in sows and their offspring (4-5 piglets per sow) at 1, 7, 21, 46 and 67 days post-farrowing (dpf).

Results

All sows were Bb-negative prior to farrowing. However, Bb-positive piglets were detected in both groups from 7 dpf. The prevalence of Bb was significantly higher in both, NV and V groups, at 21 and 46 dpf (p-value<0.001). Similarly, the number of Bb-positive piglets per litter was lower in the V group than in the NV group. Finally, the piglets in the V group showed lower relative bacterial load than those in the NV group.

Discussion & Conclusion

Immunization of pregnant sows prior to farrowing reduced the prevalence of Bb, and the bacterial load in their offspring, as shown in this paper. This finding agrees with those previously published, pointing out that, although vaccination does not avoid bacterial colonization, it does reduce the Bb burden.

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