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DETECTION OF LACTOFERRIN IN SWINE FAECES FROM AN EXPERIMENTAL INFECTION OF *B. HYODYSENTERIAE*

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Introduction

Lactoferrin is an iron-binding glycoprotein present in various tissues and secretions of animals and humans. It is associated with inflammatory processes participating in several physiological functions as immune response or protection against microbials.

The aim was the detection and quantification of lactoferrin in the faeces of *B. hyodysenteriae* infected pigs.

Material & Methods

Faeces were collected from 45 *B. hyodisenteriae* experimentally infected weaned pigs. A sandwich ELISA using rabbit polyclonal antibody for the coating of the plates and peroxidase-labelled anti-lactoferrin monoclonal antibody as conjugate was used for the quantification of lactoferrin in faecal samples. Moreover, *B. hyodysenteriae* was detected in faecal samples through culture and identification by PCR.

Results

All samples were negative to *Brachyspira* and the level of lactoferrin was low in the first three samplings, before clinical signs of swine dysentery. However, 58.3 % of samples were positive by culture-PCR and 35.5 % of samples had high levels of lactoferrin during clinical disease. Although 61 % of *Brachyspira* positive samples had high levels of lactoferrin, there were also positive samples with low levels of lactoferrin. On the other hand, 2 % of the samples with high levels of lactoferrin were negative by culture-PCR.

Discussion & Conclusion

Clinical signs of swine dysentery and *B. hyodysenteriae* shedding were associated with high levels of lactoferrin in swine faeces. However, there were differences between lactoferrin concentration and *Brachyspira* detection at the start and at the end of the follow-up period, probably when the inflammation associated with the infection was lower.