

VIRAL AND BACTERIAL INVESTIGATIONS OF RECURRENT PIG NEONATAL DIARRHOEA CASES IN SPAIN

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Introduction

Neonatal diarrhoea represents a major disease problem in the early stages of animal production, increasing significantly pre-weaning mortality and piglets weaned below the target weight. Enteric diseases in new-born piglets are often of endemic presentation, but may also occur as outbreaks with high morbidity and mortality. The objective of this study was to assess the prevalence of different pathogens that can be involved in cases of recurrent neonatal diarrhoea in Spain.

Material and Methods

A total of 327 litters from 109 sow farms located in Spain with recurrent neonatal diarrhoea were sampled to establish a differential diagnosis against the main enteric pathogens in piglets using bacteriological isolation, *Escherichia coli* genotyping, *Clostridium perfringens* immunoblotting and genotyping, and virological analyses.

Results

Globally, 105 out of 109 (96.3%) case submissions were positive to at least one of the examined enteric pathogens (*Escherichia coli*, *Clostridium perfringens* types A and C, *Transmissible gastroenteritis virus* [TGEV], *Porcine epidemic diarrhoea virus* [PEDV] or *Rotavirus type A* [RVA]). Fifty-eight out of 109 (53.2%) submissions were positive for only one of these pathogens, 47 out of 109 (43.1%) were positive for more than one pathogen and, finally, 4 out of 109 (3.7%) were negative for all these agents. *E. coli* strains were isolated from all submissions tested; however, only 11 of them were classified into defined pathotypes. *C. perfringens* type A was detected in 98 submissions (89.9%) and no *C. perfringens* type C was found. Regarding viruses, 47 (43.1%)

submissions were positive for RVA, 4 (3.7%) for PEDV and none of them for TGEV.

Discussion and conclusion

The present study shows that RVA, ETEC and *C. perfringens* type A are the main pathogens involved in persistent neonatal diarrhoea in Spain. In almost half of the cases, more than one enteric pathogen was found.