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PRELIMINARY RESULTS OF HEPATITIS E VIRUS (HEV) DETECTION IN FECES AND ORAL FLUID ON 6 DIFFERENT PIG FARMS IN SLOVENIA

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Introduction

Hepatitis E virus (HEV) is a leading causative agent of acute viral hepatitis in humans. In Europe, people are infected predominantly with HEV genotype 3, which has zoonotic potential. The main route of infection is through ingestion of contaminated pork. The aim of the study was to discover the presence of HEV from samples of oral fluid (OF) and feces of different age categories from all 3 large pig farms in Slovenia and from 3 small farms and to confirm, OF as appropriate sample compared to feces for HEV RNA detection.

Materials and methods

Pooled OF and feces samples from 6 different pig farms (3 largest Slovenian farms with more than 1000 breeding sows and 3 small-sized farms with less than 100 breeding sows) were tested. A total of 24 group samples (12 OF samples and 12 feces samples) from all categories (breeding sows, different age group of weaners and fatteners) were tested for presence of HEV. The detection of HEV RNA was performed with specific qRT-PCR.

Results

One small-sized farm out of 6 farms (16.66%) was found positive for HEV RNA in both feces and OF. Thereafter, group samples from 6 age categories from that farm were tested individually: 5 week-old (w/o), 9 w/o and 10 w/o weaners were positive for HEV RNA, whereas 12 w/o weaners, fatteners and breeding sows were tested negative.

Discussion & Conclusion

Results show that all Slovenian large farms that represent the mainstream of Slovenian pork production are HEV negative. Identical positive/negative results from both OF and feces were obtained, showing that OF is appropriate sample to isolate HEV RNA. These results confirm that most of the pigs are viremic when 1-3 months old; after that HEV is spontaneously eliminated. However, food products from this age group present a potential threat for consumers.