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ANTIMICROBIAL SUSCEPTIBILITY OF FINNISH ENTEROTOXIGENIC *E. COLI* IN PIGS IN YEARS 2013-2016

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Introduction

Enterotoxigenic *Escherichia coli* can cause porcine neonatal and post weaning diarrhea, and potentiated sulfa drugs and aminopenicillins are recommended to be used for treatment of *E. coli* diarrhea. Due to quite commonly occurring antimicrobial resistance (AMR), diagnostic samples are sent to the laboratory to find out resistance profiles of enterotoxigenic *E. coli* on pig farms. As a part of the AMR-monitoring program, antimicrobial resistance is also tested for drugs that are not in clinical use for pigs in Finland.

Material and methods

Escherichia coli isolates from pig enteritis cases were obtained from faecal or post-mortem samples submitted to the laboratory. The enterotoxigenic *E. coli* were tested for antimicrobial susceptibility and isolates defined as resistant or non-wild type based on CLSI clinical breakpoints or epidemiological cutoff values (ECOFF), respectively. Isolates with decreased susceptibility to third generation cephalosporins were tested for AmpC and ESBL production. Only one isolate per herd was included.

Results

Decreased susceptibility to tetracycline, trimethoprim-sulfamethoxazole, ampicillin, streptomycin and quinolones were frequently observed. Also multiresistant isolates and one or a few AmpC producers were detected each year. Non-wild type isolates to colistin, gentamicin or florfenicol were not found.

Discussion and conclusion

The true AMR situation related to drugs in clinical use in Finnish pig herds might be better than these results indicate since the farms that frequently use antimicrobials and where the antimicrobial treatments are ineffective, are more likely to send samples. Also, the number of isolates tested each year was relatively low. However, decreased susceptibility is common and in case of recurrent antimicrobial use for diarrhea in pigs, the choice of the drug should be based on laboratory diagnostics and resistance profiles of enterotoxigenic *E. coli* on the farm.

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