

Original article

Antibiotic susceptibility of bacteria isolated from respiratory tract of pigs in Poland between 2004 and 2008

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Abstract

Antibiotic susceptibility of bacteria isolated from nasal swabs and lungs of pigs, to 16 commonly used antibiotics, was determined by disc diffusion test. β -lactams showed the best activity against *Streptococcus suis* (*S. suis*) (> 99% of susceptible strains). The lowest sensitivity of *S. suis* was evidenced to: tylosin, tetracycline and neomycin (50%, 40% and 25%, respectively). Isolates of *Escherichia coli* (*E. coli*) demonstrated the highest susceptibility to cephalosporin (85% strains), gentamicin and norfloxacin (over 74%). The lowest susceptibility of *E. coli* was demonstrated to tiamulin and penicillin (11.3% and 1.9%, respectively). Over 80% of *Actinobacillus pleuropneumoniae* (*App*) strains were susceptible to all antibiotics tested. The highest resistance of *App*, but demonstrated by below 20% of tested isolates only, was evidenced to neomycin and LxS. Isolates of *Pasteurella multocida* (*Pm*), *Haemophilus parasuis* (*Hps*) and *Arcanobacterium pyogenes* (*A. pyogenes*) were highly susceptible to the most antibiotics included in the analysis. The comparison of the *in vitro* susceptibility of pathogens to the chemotherapeutics used on Polish farms for the therapy of bacterial infection of pigs within the last five years and the last 10 years, showed an increasing percent of *E. coli* and *S. suis* strains resistant to commonly used antibiotics. It is also shown that *Pm*, *Hps*, *App* and *A. pyogenes* isolates were continuously susceptible to the most chemotherapeutics applied.

Key words: swine, respiratory tract, bacteria, antibiotic susceptibility