BBD-PP-55

TITLE

PAN-EUROPEAN SUSCEPTIBILITY OF SWINE RESPIRATORY DISEASE PATHOGENS TO GAMITHROMYCIN AND OTHER ANTIMICROBIAL SUBSTANCES

Olivier Merdy[1], Gerty Vanantwerpen[2], Jutta Verspohl[3], Marie-Hélène Bayon-Auboyer[4], Andrea Luppi[5], Carlo Rosignoli[5], Denis Vio[6], Mateo Del Pozo[7], Roberto Arena[1], Michele Dottori[5]

[1] *Boehringer Ingelheim Animal Health, Germany*
[2] *DGZ, Belgium*
[3] *TIHO, Germany*
[4] *LABOCEA, France*
[5] *IZSLER, Italy*
[6] *IZS Veneto, Italy*
[7] *Labopat Imasd, Spain*

CONTENT

Background
Prudent use of antibiotics requires susceptibility testing to justify the antimicrobial substance choice and helping in the maximization of treatment efficacy. This study was conducted to determine the susceptibility of swine respiratory pathogens to gamithromycin as well as other prescribed antimicrobials.
Material and methods
Seven diagnostic laboratories from 5 different European countries (France, Spain, Italy, Belgium, Germany) participated to the survey. A total of 162 Actinobacillus pleuropneumoniae (App), 81 Pasteurella multocida (Pm), 43 Bordetella bronchiseptica (Bb) and 35 Haemophilus parasuis (Hps) isolates from unknown anamnesis were tested by microbroth dilution method as per CLSI recommendations. The same batch of microdilution plates were used in all laboratories. Susceptibility to gamithromycin tests were duplicated using disk diffusion technique. Results were interpreted using CLSI resistance breakpoints where available.
Results
Gamithromycin MIC50 and MIC90 were 2.0/8.0 µg/mL for App, 0.5/2.0 µg/mL for Pm, 2.0/4.0 µg/mL for Bb and 0.5/1.0 µg/mL for Hps.
Only 2% (3/162) isolates (3 App) showed an elevated gamithromycin MIC value of 32 µg/mL or higher.
Resistance rates of App were 20% for tilmicosin (n=32), 17% for tulathromycin (n=27), 29% for tetracycline (n=46) and 2% for florfenicol (n=3).
Low gamithromycin MIC values of maximum of 8.0 µg/mL were determined for Pm, Bb and Hps isolates.
Excluding one isolate with elevated MIC, other Bb (42/43) showed MIC values clearly identified as a wild-type distribution (?2.0 µg/mL).
Multi-resistance to the tested antibiotics including other macrolides were observed for the four isolates with elevated MIC to gamithromycin (3 App, 1 Bb).
The correlation observed between MIC values and inhibition diameters allowed to consider good degree of agreement between the two techniques for diagnostic purpose: None of the tested isolates showed an elevated MIC and a large inhibition diameter.
Conclusion
This study confirmed, under Pan-European field conditions, the susceptibility values of SRD pathogens to gamithromycin.