



BACTERIAL DISEASES

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PREVALENCE OF BACTERIAL PATHOGENS ISOLATED FROM URINARY SAMPLES OF SOWS IN BRITTANY IN 2017 AND ANTIMICROBIAL SUSCEPTIBILITY TO DIFFERENT ANTIBIOTICS OF *ESCHERICHIA COLI* ISOLATED IN THESE SAMPLES

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Introduction

In France, urinary tract infections (UTI) in sows can affect the breeding performances, particularly fertility, and sometimes lead to mortality of sows. Such infections are often under or late diagnosed. Subsequent economic losses raise awareness of farmers to detect these diseases. The aim of this study was to describe bacteria encountered in UTI in France and to measure their prevalence.

Material and Methods

93 samples were collected in 17 farms in Brittany from sows with cloudy or nitrite positive urine. Every sample was submitted to standard bacteriological culture (isolation, numeration and identification by MALDI-TOF). Antimicrobial susceptibility testing by a disk-diffusion method according to the CA-SFM French guideline was performed on strains considered as relevant pathogens.

Results

The data showed that for 87% of samples a single bacteria was isolated. For 73% of samples, *Escherichia coli* was isolated while Gram positive bacteria were isolated from remaining samples. 11% of them were *Staphylococcus spp.* The same proportions were nearly found when including relevant bacteria isolated from polymicrobial samples. In such polymicrobial samples, combinations of bacteria were mainly *Escherichia coli* of morphologically-different strains, or *Escherichia coli* with *Enterococcus spp.* or *Streptococcus spp.* Antibiograms were performed on the strains of *Escherichia coli*, highlighting higher sensitivity (100%) of these strains to colistin, apramycin and 3rd and 4th generation cephalosporins as well as lower sensitivity to amoxicillin (40%), tetracyclines (31%) and trimethoprim-sulfonamides (65%), antibiotics largely used in collective and metaphylactic treatment in sows.

Discussion and Conclusions

These results were correlated with the data found in the literature. The main difference was the highest prevalence of *Enterococcus spp.* found in relation to a lower isolation rate of *Streptococcus spp.* It seems therefore important to set up early detection of UTI in order to use targeted curative treatments and limit resistance to antibiotics.