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Evento Submissao: 27º Congresso Brasileiro de Microbiologia

AREA: Microbiologia Veterinária - Divisão K

SUB-AREA: Métodos de Diagnóstico microbiológico e sensibilidade aos antimicrobianos

EVALUATION OF TETRACYCLINE AND ERYTHROMYCIN RESISTANCE IN STREPTOCOCCUS AGALACTIAE ISOLATED FROM BOVINE SUBCLINICAL MASTITIS

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Resumo:

The bacterium *Streptococcus agalactiae* is recognized worldwide as a major pathogen causing clinical and subclinical intramammary infections in lactating cows. The aim of this study was to characterize the antimicrobial resistance patterns of *S. agalactiae* isolated from cows with subclinical mastitis. The bacteria were isolated on sheep blood agar from composite milk samples aseptically collected in 11 herds in the Zona da Mata region in Minas Gerais State - Brazil. Antibiotic resistance was determined by the agar diffusion method according to CLSI guidelines and the detection of resistance genes performed by PCR. A total of 130 isolates were identified as *S. agalactiae* by classical microbiological methods (colony morphology, hemolytic activity on sheep blood agar medium, Gram staining characteristics, catalase reaction, CAMP test, hippurate and esculin hydrolysis) and confirmed by PCR amplification of a 120 bp DNA fragment species-specific corresponding to part of the gene encoding for the 16S rRNA. The isolates most frequently exhibited phenotypic resistance to tetracycline and erythromycin. The *ermB* gene was found in 95% of isolates phenotypically resistant to erythromycin (n=40). Among the isolates phenotypically resistant to tetracycline, *tetM* and *tetO* genes were found in 23 (51%) and 29 (64%), respectively, and 06 isolates (13%) presented the genotype *tetM/tetO*. Moreover, resistance genes were also detected in some susceptible isolates, showing that the resistance genotype does not accurately correlate to the phenotypic resistance. On the other hand, no genetic determinant was detected in some phenotypically resistant isolates indicating that further work is needed to better document the genetic background of antimicrobial resistance in this group of bacteria.

Palavras-chaves: Streptococcus agalactiae, bovine mastitis, antibiotic resistance, erythromycin, tetracycline

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PROGRAMA E RESUMOS

Eventos paralelos:

II Simpósio Iberoamericano sobre Micro-organismos Fotossintetizantes

XV Simpósio Brasileiro de Micobactérias

II Simpósio de Fermentação Alcoólica

I Brazilian Microbiome Workshop and II Brazilian Microbiome Project Meeting

IV Simpósio de Coleções de Cultura

Mini-Simpósio sobre New Delhi metalo-beta-lactamase-1 (NDM-1)