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Comparison of conventional urine culture and BACT/ALERT® PF PLUS bottles for monitoring urinary tract infections in companion animals under different clinical and therapeutic conditions

Content

Urinary tract infections (UTIs) are common in companion animals. According to current guidelines, sporadic UTIs can typically be managed with a short course of antibiotics. However, recurrent UTIs are common and warrants closer follow-up. Assessing treatment efficacy typically requires a temporary suspension for culture to prevent false negative results, which may pose risks of infection worsening or recurrence. This study compares conventional urine culture with BACT/ALERT® PF PLUS bottles, which neutralize antimicrobials and may allow accurate microbiological monitoring during treatment. A total of 814 urine samples, mostly from animals under antibiotic therapy, were collected via cystocentesis. Each sample was tested with both conventional culture on CHROMID® CPS® ELITE and BACT/ALERT® PF PLUS and incubated with the BACT/ALERT® 3D system. Positive samples were plated for identification via MALDI-TOF MS and underwent antibiotic susceptibility testing. Results were evaluated considering clinical history and urinalysis. BACT/ALERT® PF PLUS demonstrated greater sensitivity, detecting pathogens in samples negative by conventional culture and identifying additional bacterial species. This method was especially useful in follow-up of recurrent or complicated UTIs. It supports informed decision-making on antimicrobial therapy discontinuation, thereby promoting targeted treatment and contributing to antimicrobial resistance prevention.

Keywords

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