



WINN FELINE FOUNDATION

For the Health and Well-being of All Cats

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EVALUATING THE CONCENTRATION OF AMOXICILLIN AND CLAVULANATE

PROJECT STUDY: Evaluation of feline urine concentration of amoxicillin and clavulanate.

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Final report summary, W19-039

Both physicians and veterinarians are trying to make smart decisions when prescribing antibiotics. We want antibiotics to be available and effective when needed to treat basic and resistant infections in pets and people. When cats develop urinary tract infections (UTIs), submitting a urine sample for culture is important so the type of bacteria can be identified, and the veterinarian can find out which antibiotics are most likely to work for treating that infection. However, veterinarians first need to know how much of the antibiotics will concentrate in the cat's urine, which is the site of the infection.

Amoxicillin and amoxicillin-clavulanate (e.g. Clavamox) are commonly used antibiotics for UTIs in cats, but no studies were previously available reporting how much of these antibiotics concentrate in cats' urine. Data from the Midwestern USA and from Europe show that nearly all feline urinary *E. coli* cultures were labeled resistant to these antibiotics, because resistance is currently being determined from how much antibiotic can concentrate in the blood, not the urine. Consequently, veterinarians prescribe alternative antibiotics to cats that could be more expensive, injectable only, or those which are preferred for human use.

The current study measured the urine concentration of amoxicillin and clavulanate in 12 cats after administering Clavamox orally. It was determined that cats have high concentrations of amoxicillin and clavulanate in their urine, similar to dogs. The Veterinary Antimicrobial Susceptibility Testing committee at the Clinical Laboratory Standards Institute will use the information gained from this study to create new guidelines that will be implemented in veterinary laboratories nation-wide, dictating when a cat's UTI should be labeled susceptible or resistant to these antibiotics.

By having the data from this study, more feline UTIs will now be correctly labeled as susceptible to these oral and inexpensive antibiotics, which will make treatment easier for cat owners and will allow veterinarians to preserve other more expensive or injectable antibiotics for when infections are proven resistant. This study will provide evidence-based guidelines to help veterinarians make smart decisions when prescribing antibiotics for their patients and will improve overall treatment of feline UTIs.

Publication: A manuscript has been submitted for publication.

Presentations: Accepted for an poster presentation at the ACVIM Forum, June 2020.

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