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Doxycycline with or without famciclovir for infectious ophthalmic and respiratory disease: a prospective, randomized, masked, placebo-controlled trial in 373 kittens

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Abstract

Objectives: The aim of this study was to prospectively evaluate in a randomized, triple-masked, placebo-controlled trial, outcomes for kittens with ocular manifestations of infectious upper respiratory disease (IURD) treated with an ophthalmic and oral antibiotic only vs those also treated with famciclovir.

Methods: Kittens were stratified into three age (1 to <4, 4 to <8 or 8-12 weeks) and two disease severity ('mild' [total disease score 1-11] or 'severe' [total disease score 12-23]) groups and randomized to receive approximately 5 mg/kg doxycycline either with placebo (group D) or with approximately 90 mg/kg famciclovir (group DF) PO q12h. Caregivers scored clinical signs once daily for 21 days. Ophthalmic examinations and scoring by veterinarians were completed on days 1 and 21. Ophthalmic and clinical resolution were defined as scores of zero for all ocular signs and all ocular and respiratory signs, respectively. Ophthalmic and clinical recovery were defined by absence of active inflammation.

Results: For kittens with mild disease, those in group D were slower than those in group DF to achieve clinical recovery ($P = 0.049$) and clinical resolution ($P = 0.030$), but not ophthalmic recovery ($P = 0.064$) or ophthalmic resolution ($P = 0.089$). Kittens with mild disease and receiving famciclovir achieved predicted 75% clinical resolution 4-5 days earlier than kittens with mild disease and receiving doxycycline alone, and kittens with severe disease (regardless of treatment group). Significantly fewer kittens in group DF developed corneal disease than in group D ($P = 0.016$). All five kittens whose clinical signs worsened sufficiently to be removed from the study were in group D.

Conclusions and relevance: The addition of famciclovir to standard antibiotic treatment may reduce corneal disease, length of stay and time to adoption for shelters and rescue groups, thereby

increasing capacity for care. Early administration of famciclovir in kittens exhibiting mild ocular manifestations of IURD may be preferable to delaying this treatment until the disease progresses to a severe stage.

Keywords: Feline herpesvirus; antiviral medications; feline medicine; infectious disease; ophthalmology; pediatrics.

PubMed Disclaimer

Figures

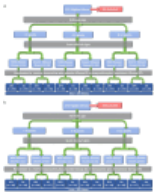

Figure 1 A total of 373 kittens…

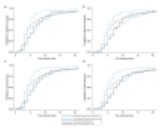

Figure 2 Kaplan–Meier survival curves showing the…

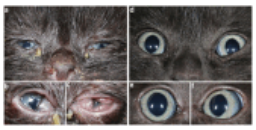

Figure 3 External photographs of (a,d) both…

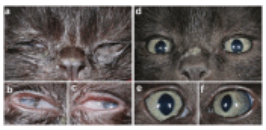

Figure 4 External photographs of (a,d) both…

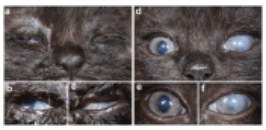

Figure 5 External photographs of (a,d) both…

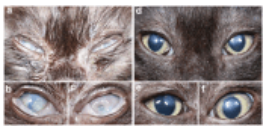

Figure 6 External photographs of (a,d) both…

All figures (8)

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