

FELINE BORDETELLOSIS : RESULTS OF A CROSS-SECTIONAL SURVEY

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Une enquête a été réalisée en Grande-Bretagne pour déterminer la prévalence des infections à *Bordetella bronchiseptica* chez les chats et estimer les facteurs de risque de cette infection. Les données ont été analysées en réalisant des tests du Khi-deux ainsi que des modèles de régression logistique ordinaire et de régression logistique binomiale avec un effet aléatoire tenant compte du regroupement par chatterie. *B. bronchiseptica* a été isolée chez 82 chats sur 740 (11%). Les facteurs associés à l'infection par *Bordetella* lors de l'étape univariée regroupaient le type et la taille du logement, le contact avec des chiens atteints d'affections respiratoires et l'existence d'antécédents de maladies respiratoires chez le chat. Pour le modèle de régression logistique ordinaire, la bordetellose féline a été associée à l'environnement des refuges pour chats, à la présence de plus de 50 chats et au contact avec des chiens atteints d'affections respiratoires. En ajoutant un effet aléatoire au modèle tenant compte du regroupement des chats, les variables significatives du modèle étaient le contact avec des chiens atteints de maladies respiratoires et la présence de plus de 50 chats dans les refuges.

INTRODUCTION

Bordetella bronchiseptica is an important cause of respiratory tract disease in dogs, pigs and other mammalian species (Goodnow 1980). Until relatively recently, it was implicated only in occasional outbreaks of disease in laboratory colonies of cats, but in the last few years, *B. bronchiseptica* has been implicated as the cause of field cases of feline respiratory disease (Welsh 1996), and has been shown to be capable of eliciting primary respiratory disease in experimentally-infected cats (Coutts *et al* 1996). The aim of this survey was to determine the prevalence of infection with *B. bronchiseptica* in the British feline population, and the risk factors associated with it.

METHODS

Oropharyngeal swabs were obtained from cats kept in rescue catteries, in breeding colonies or as pets. Bacteria were cultured on selective charcoal-cephalexin agar and identified using the api 20NE biochemical system. Each sample was accompanied by a survey questionnaire, comprising questions regarding the age, sex, health and vaccination history of the individual cats, their environment, and in-contact animals. Potential risk factors for feline bordetellosis were identified by Chi-squared analysis using Epi-Info v.6.02, and forward stepwise unconditional logistic regression using EGRET. Logistic-binomial regression with a random effect term for clustering of cats within households was also carried out.

RESULTS

Swabs were obtained from 740 cats, and *Bordetella bronchiseptica* was isolated from 82 (11%) of them. Two hundred and eighty-one cats (38%) had signs of respiratory disease at the time of sampling. Factors associated with *Bordetella* infection ($p < 0.05$) in the univariate analysis included household type and size, contact with dogs with respiratory disease, and a history of respiratory tract disease in the cat. In ordinary logistic regression analysis, variables associated with *Bordetella* isolation were a rescue cattery environment (adjusted OR = 5.3), the presence of more than 50 cats on the premises (aOR = 27.6), and contact with dogs with respiratory disease (aOR = 5.5). An age greater than 7 years was negatively associated with *Bordetella* isolation (aOR = 0.15), as was the presence of dogs in the household (aOR = 0.16). When cases were matched on household, thus including a random effects term for clustering, variables remaining significantly associated with *Bordetella* isolation were contact with dogs with respiratory disease (aOR = 6.2), and the presence of more than 50 cats on the premises (aOR = 15.9).

CONCLUSIONS

Bordetella bronchiseptica is relatively frequently isolated from cats. Risk factors for infection include larger households, particularly rescue catteries. The association of feline bordetellosis with contact with dogs with respiratory disease warrants further study.

BIBLIOGRAPHY

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3