



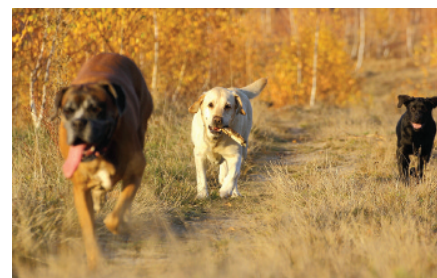
Canine Brucellosis Outbreaks: A Lingering Concern

Canine brucellosis is a zoonotic health concern in developing nations with large populations of free-roaming, sexually intact dogs. This study described an outbreak of brucellosis that occurred in a group of dogs in Buenos Aires, Argentina. An intact female (with a history of abortion and stillbirths) and 3 of her puppies, were *Brucella canis* seropositive. One puppy died from brucellosis 20 days before castration; the remaining were neutered on day 30 postisolation. Two months later, treatment with enrofloxacin (7 mg/kg IV q24h for 30 days) was initiated. The female dog died of undetermined causes 13 months after initial isolation. The remaining pups were treated with a second course of enrofloxacin at a higher dose (10–12 mg/kg IV q24h for 30 days). Blood and urine cultures were negative for *Brucella canis* in both pups thereafter.

A survey of dogs ($n = 41$) living in the vicinity revealed 9 to be seropositive for brucellosis. Variable number of tandem repeat (VNTR) analysis comparing human and study dog *B canis* isolates indicated 13 of the 17 VNTR loci considered were identical. Persistent *B canis* infection was concluded to be a source of infection for neighborhood dogs, likely via contaminated urine. Brucellosis can persist beyond neutering and antibiotics; stray dogs should be controlled and educational programs enacted to protect public health.

■ Commentary

Canine brucellosis outbreaks continue, although they are rarely reported. This outbreak was confirmed by several methods, but the report did not offer new or substantial information on the disease or its epidemiology, treatment, or control.



Owner infection was noted only with the mention of a human isolate. Treatments were attempted, but results were inconsistent. Control in free-ranging dogs involved castration. Transmission of *B canis* via urine was implied, but no quantitative determination of bacterial numbers was performed.—L.E. Carmichael, DVM, PhD, Dhc (Liege)

■ ■ Source

Monitoring infected dogs after a canine brucellosis outbreak. Reynes E, López G, Ayala SM, et al. *COMP IMMUNOL MICROB* 35:533-537, 2012.



A New *Aspergillus* Species

Aspergillosis, a mycotic infection, can affect a wide range of animal species. This report described a new *Aspergillus* species: *A felis*. The authors identified *A felis* as the causative agent of chronic invasive fungal rhinosinusitis (FRS) in cats. With this infection, mycosis often spreads from the sinus and nasal cavities to the orbit, creating a retrobulbar granuloma and subsequent unilateral exophthalmos. The infection is often difficult to treat, even with aggressive antifungal therapy. In this study, most cats with chronic invasive FRS were euthanized because of poor therapeutic response. Infections previously thought to be caused by an *A fumigatus*-like species were identified as *A felis* through phenotypic, physiologic, and phylogenetic analyses. In this report, *A felis* was found to cause disseminated invasive

aspergillosis in a dog, fungal rhinosinusitis in cats, and chronic invasive pulmonary aspergillosis in humans.

■ Commentary

The striking clinical feature of this report is that most patients affected by *A felis* infection were immunocompetent cats (18/23 patients), whereas others were immunocompromised dogs or humans. It has been traditionally thought (and taught) that deep-fungal and bacterial infections (eg, cryptococcosis, mycobacteriosis) were most common in cats because of their susceptibility to viral immunodeficiency diseases. It is now evident that this is not always the case, at least for cryptococcosis¹ and mycobacteriosis.² The implication is that such infections cannot be excluded from the list of differentials in

immunocompetent cats and that cats are more susceptible than dogs to various deep, systemic infectious agents, such as environmental fungi, cryptococcus, mycobacteria, and other atypical bacteria.—Chiara Noli, DMV, DECVD

■ ■ Source

Aspergillus felis sp. nov: An emerging agent of invasive Aspergillosis in humans, cats, and dogs. Barrs VR, van Doorn TM, Houbraken J, et al. *PLOS ONE* 8:e64871, 2013.

1. **Feline cryptococcosis: Impact of current research on clinical management.** Trivedi SR, Malik R, Meyer W, Sykes JE. *J Feline Med Surg* 13:163-172, 2011.
2. **Feline leprosy: Two different clinical syndromes.** Malik R, Hughes MS, James G, et al. *J Feline Med Surg* 4:43-59, 2004.

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Giardiasis—Risk Factors & Prevalence

Data from a national electronic database was evaluated to estimate the prevalence and identify risk factors for *Giardia* spp infection in dogs in the United States, including 2.5 million owned dogs in 43 states from January 2003–December 2009. During routine visits, fecal flotation with zinc sulfate without centrifugation was performed to detect *Giardia* spp cysts in patients with and without signs. Cysts were found in 0.44% of dogs; this rate is similar to that in some recent studies, but lower than in those utilizing ELISA methods.

There was a steady decrease in annual prevalence and slight seasonal increase during the winter and summer. Improvements in hygiene and parasite control may have contributed, but declining annual prevalence should be interpreted with caution at this time. Prevalence was highest in

the mountain regions (ie, Colorado), followed by New England, especially Maine. *Giardia* spp prevalence was greatest for dogs under 6 months of age (0.63%). Variations by sex and neuter status, with sexually intact females demonstrating greatest prevalence, although statistically significant, may not be clinically discernible. Working breeds showed highest prevalence, most likely reflecting their activities rather than biological factors. However, the low prevalence in crossbreeds compared with pure breeds should be noted.

■ Commentary

As expected, this study showed that puppies can be more commonly infected by *Giardia* spp than can adult dogs. Regional variation was also seen; however, sample sizes were not equal. Actual infection rates are likely to be higher than those reported in this study, because passive flotation on

small fecal samples is not a sensitive technique compared with centrifugation on larger samples or antigen-detection tests (eg, ELISA, IFA, PCR). Presence or absence of signs (eg, diarrhea) was not studied as a risk factor and is worthy of further study. It would also be helpful to study how puppies were acquired (eg, breeder, shelter, pet store). Practitioners can use these and other data to help determine the risk for giardiasis and guide diagnostic testing.—*Craig Datz, DVM, MS, DABVP (Canine & Feline), DACVN*

■ ■ Source

Prevalence and risk factors for *Giardia* spp. infection in a large national sample of pet dogs visiting veterinary hospitals in the United States (2003-2009). Mohamed AS, Glickman LT, Camp Jr JW, et al. *VET PARASITOL* 195:35-41, 2013.

FOCUS



Megestrol Acetate for Free-Roaming Cats

Large populations of free-roaming domestic cats have long posed problems for animal welfare, public health, and ecosystem management. They are capable of spreading serious diseases (eg, rabies) and are known to have a deleterious impact on local wildlife. Surgical sterilization is currently the common means of restricting reproduction, but this has limitations. The numbers of reproducing cats are too large for surgical sterilization alone to result in effective population reduction. Adjunctive contraception is necessary.

Megestrol acetate (MA), a synthetic progestin known to inhibit reproduction, is widely available as a tasteless, odorless powder and has been used to control reproduction in domestic cats, albeit without FDA approval or specific labeling. Several issues surround MA as a means of

contraception in free-roaming cat colonies, including adverse effects on both domestic cats and nontarget species encountering the drug in the wild. Known possible effects include endometrial hyperplasia, pyometra, diabetes mellitus, and adrenocortical suppression. Also, environmental impacts, dosage and efficacy concerns, and which agency (ie, FDA, EPA) would be responsible for drug approval need to be determined through rigorous clinical and field trials before widespread MA use.

■ Commentary

Trap-neuter-return (TNR) programs for stray and feral cats are gaining popularity among those seeking nonlethal population control. Although surgical sterilization is definitive, there is a need for nonsurgical contraception to control cats that evade trapping or when more cost-effective

methods are required. Compounded low-dose MA became popular among a subset of TNR caregivers, but the need to assure that each female cat consumed its weekly dose made it potentially impractical. Internet sites hosted by MA advocates currently provide advice on how to obtain MA from compounding or Internet pharmacies. An interesting challenge is defining the prescribing authority for feral cats, because they cannot be individually examined to establish a valid client–patient–veterinarian relationship. More about MA and developments in feline contraception can be found online (acc-d.org).—*Julie Levy, DVM, PhD, DACVIM*

■ ■ Source

Low-dose megestrol acetate revisited: A viable adjunct to surgical sterilization in free roaming cats? Greenberg M, Lawler D, Zawistowski S, Jöchle W. *VET J* 196:304-308, 2013 ■ **cb**