

Research Note

Tick'd Off Cats

Recent evidence has identified clinically ill cats with *Anaplasma phagocytophilum* DNA amplified from blood with apparent clinical responses to tetracycline therapy.

Ixodes scapularis is the vector for both *A phagocytophilum* and *B burgdorferi*. Healthy *A phagocytophilum* and *B burgdorferi* antibody-negative cats were infested with wild-caught *I scapularis* ticks in order to monitor for develop-

ment of clinical disease, test for *A phagocytophilum* DNA via polymerase chain reaction (PCR) and for antibodies to *B burgdorferi* C6 peptide, *A phagocytophilum* P44 peptide, and the novel *A phagocytophilum* P44-4 peptide. Although none of the cats became clinically ill, all became PCR-positive and developed antibodies against both *A phagocytophilum* and *B burgdorferi*. *A phagocytophilum* morulae were also detectable in all patients.

Oral doxycycline (10 mg/kg daily for 14 days) was administered to all patients starting 13 weeks after tick infestation; the cats became PCR- and morulae-negative but still had detectable antibodies. Antibodies against *A*

phagocytophilum P44-4 were detected 2 to 3 weeks before those of P44, thus P44-4 may be a better target for *A phagocytophilum* detection going forward. However, DNA for *A phagocytophilum* was amplified from blood prior to detection of either antibody. Given the lack of feline Lyme disease evidence described in the literature, *Borrelia burgdorferi* is not likely to be a primary pathogen of cats.

Source

Lappin MR, Chandrashekar R, Stillman B, Liu J, Mather TN. Evidence of *Anaplasma phagocytophilum* and *Borrelia burgdorferi* infection in cats after exposure to wild-caught *Ixodes scapularis*. *J Vet Diag Invest*. 2015;27(4):522-525.

Hair Loss & Hormones

Estrogen is a hair growth-inhibitor in dogs and is commonly associated with Sertoli cell tumor skin disease and female hyperestrogenism. Five dogs (3 in the same household) with short, fine hair coats developed progressive noninflammatory alopecia. Routine physical examination and diagnostic testing did not reveal an underlying cause. Skin biopsies revealed changes typical of noninflammatory alopecic disorders (eg, follicular atrophy, hair follicles predominantly in the kenogen or telogen

stage). Detailed questioning of the owners revealed that all used transdermal estrogen gels and that the dogs had close contact with the owners, including sleeping in the owners' beds, before the onset of hair loss. An elevated estrogen concentration was identified in 1 of 2 dogs tested. Alopecia almost completely resolved after contact with the gel was stopped.

Commentary

Noninflammatory alopecia of dogs can be a frustrating disorder for small animal practitioners. It is easy to forget the diagnostic algorithm for hair loss without itch or redness or rash because allergic and parasitic causes of skin disease are vastly more common. Patient exposure to medications used

by people in the household might not be among the questions typically asked when gathering history. In cases of non-inflammatory alopecia in dogs, the possibility of exposure to hormone-replacement therapies should be questioned along with the examination and diagnostic tests described in this case series.—Liz Layne, DVM

Source

Wiener DJ, Rüfenacht S, Koch HJ, Mauldin EA, Mayer U, Welle MM. Estradiol-induced alopecia in five dogs after contact with a transdermal gel used for the treatment of postmenopausal syndrome in women. *Vet Dermatol*. 2015;26(5):393-e91.

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