Heart Murmurs in Healthy Dogs

Physiological heart murmurs (PHM) are sounds produced by blood flow in the absence of structural heart and great vessel abnormalities. They may occur in young dogs less than 6 months of age ("innocent" murmurs), or as a result of anemia, fever, or systemic hypertension ("functional" murmurs). Adult PHMs are more common in some breeds (eg, boxers) and may be attributed to increased sympathetic tone (eg, secondary to anxiety).

This prospective study sought to determine the prevalence of PHMs in healthy young adult dogs (1-5 years of age) of various breeds presented for vaccination. Of 109 client-owned dogs evaluated, 95 completed the study. Dogs underwent physical examination, urinalysis, CBC, and blood pressure measurement to confirm healthy status. Cardiac auscultations were performed by 3 independent examiners. Dogs with heart murmurs underwent echocardiographic examination to screen for structural cardiovascular abnormalities.

Prevalence of PHMs varied from 6% to 12% depending on the echocardiographic criteria used to exclude heart and great vessel abnormalities. All PHMs were systolic and low-grade (I-III/VI). Epidemiological features of dogs with PHMs were not different from dogs without murmurs. The authors noted the biggest challenge was distinguishing between physiological and pathological murmurs because of varying echocardiographic criteria for normality. They concluded that PHMs are relatively common in healthy young adult dogs and may not be limited to specific breeds.

Commentary

Primary care veterinarians often discover new murmurs on routine wellness examinations. When a murmur is noted in a young, healthy dog, recommending further advanced diagnostics may cause owner anxiety as well as additional expenses, including referral for echocardiography. This paper helped quantify the presence of physiologic or "innocent" murmurs vs those heard because of underlying disease in young, otherwise healthy dogs. The location and grade of these physiologic murmurs were consistently found to be systolic, low-grade, and louder over the left heart base. In this study, echocardiographic abnormalities were detected in half of dogs with heart murmurs. Even with echocardiography, it may be difficult to distinguish between physiologic and mild pathologic heart murmurs, including subaortic stenosis, systolic pulmonary hypertension, and mild mitral regurgitation. More information about the prevalence of innocent murmurs in this dog population will help guide the discussion of whether to recommend advanced diagnostics.—*Elizabeth Alvarez, DVM, DABVP*

Source

Drut A, Ribas T, Floch F, et al. Prevalence of physiological heart murmurs in a population of 95 healthy young adult dogs. *J Small Anim Pract.* 2015;56(2):112-118.

Research Note

FOCUS *Microsporum canis* in Shelters

Microsporum canis dermatophytosis is highly contagious and easily spread through fomites. *M canis* can be extremely difficult to eradicate from shelters where large numbers of cats are admitted daily and cats are allowed to intermingle.

The authors summarize the protocol used in endemic dermatophytosis eradication in a private, open-admission shelter. Fungal cultures (FC) found 166 of 210 (79%) cats in the non-public area and 38 of 99 (38%) cats in the public area were positive. While awaiting FC results, the cats in the public area were treated with once-weekly lime sulfur rinses. Cats in the non-public area were not treated. When FCs were complete, the cats were physically separated into 2 groups, high-risk ($n = 38$) and low-risk ($n = 61$), based on presence of skin lesions. Cats without skin lesions were put into the low-risk group and treated with weekly lime sulfur rinses until 2 negative FCs were obtained. High-risk cats received twice-weekly lime sulfur rinses and oral terbinafine, and within weeks only 5 of 38 cases were still culture positive. Incoming cats were screened for visible skin lesions by use of a Wood lamp and FC. New cleaning strategies (eg, daily bedding changes, cleaning low-risk areas before high-risk areas, bleaching surfaces twice weekly) were implemented. The flow of cats through the shelter was altered to allow continued admissions and adoptions during the eradication period. The dermatophytosis outbreak was eradicated within 5 months as a result of treatment strategy and careful analysis of animal flow and intake procedures. *Partial funding provided by Dechra Veterinary Products.*

Source

Newbury S, Moriello K, Coyner K, Trimmer A, Kunder D. Management of endemic *Microsporum canis* dermatophytosis in an open admission shelter: a field study. *J Feline Med Surg.* 2015;17(4):342-347.

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