FOCUS: Orthopedics/Rehabilitation

Tapping into Polyarthritis Treatment

Canine immune-mediated polyarthritis (IMPA) is overrepresented in retrievers, spaniels, and German shepherds. Dogs with IMPA may have nonspecific (eg, weight loss, inappetence, lethargy, reluctance to move) or more specific (eg, fever, stiff/stilted gait, swelling of multiple joints) clinical signs. Dogs with IMPA commonly present with no obvious joint swelling or localizable pain. Underlying infection, inflammatory disease, or neoplasia should be thoroughly investigated.

Arthrocentesis and synovial fluid analysis, along with CBC, blood chemistry, urinalysis, and urine culture, should be considered. IMPA can cause mild to moderate elevation in serum alkaline phosphatase (SAP), and special culture techniques may be required to identify bacterial causes. Echocardiography may also be necessary to look for endocarditis. IMPA treatment should target the underlying cause if identified. If tick-borne diseases are geographically prevalent, initial therapy should be limited to analgesics and empiric treatment with doxycycline. Treatment with immunosuppressive drugs may be necessary, but because IMPA is rarely life-threatening, it is preferable to withhold these drugs until bacterial arthritis has been excluded. Patients should be monitored closely; some may require lifelong treatment.

Commentary

Neutrophilic inflammation of a single large joint suggests septic arthritis, whereas IMPA commonly affects multiple small joints (carpi, tarsi). I do not recommend joint taps until a 3- to 5-day course of doxycycline has failed; if there is no response, further diagnostics should be performed (CBC, platelet count, serum biochemistry profile, urinalysis, protein:creatinine ratio). I routinely tap 4 joints (both tarsi and carpi). Joint taps from the stifles are less valuable because concurrent cruciate rupture may complicate interpretation. I routinely treat IMPA using prednisone with azathioprine, gradually tapering once complete clinical response has occurred but do not perform serial joint taps to monitor response. Many cases can be tapered off medication over 6 months without relapse. Prognosis is good in most cases.—*Michael Stone, DVM, DACVIM*

Source

Canine immune-mediated polyarthritis: Part 2: Diagnosis and treatment. Johnson KC, Mackin K. ***JAAHA*** 48:72-81, 2012.

FIV and Real-Time PCR

The usefulness of serum antibody titers for diagnosing FIV infection has greatly diminished because antibodies from vaccinated cats are indistinguishable from those that develop after natural infection. This study evaluated the sensitivity and specificity of 3 real-time PCR tests for diagnosing FIV infection. One test targeted the *pol* gene and 2 targeted the *gag* gene; 2 serologic tests were used for comparison. Two populations of cats were tested: high-risk (males >4 years) and low-risk (males ≤4 years, females), with 128 cats enrolled in each group. Serum and whole blood were tested from each cat using the 2 serologic and 3 PCR tests, respectively. Results showed that sensitivities of the PCR tests were moderately high (median, 0.85–0.89) but lower than those of the 2 serologic tests (0.89–0.97). Median specificities of 2 PCR tests were moderate (0.94–0.96) but slightly lower than those of the serologic tests (0.95–0.97). The 1 PCR test based on 1 region of the *gag* gene was inferior.

Commentary

Some commercial laboratories offer conventional real-time PCR tests to distinguish cats with natural FIV infection from vaccinates. However, studies have demonstrated that test performance varies widely, depending on assay and laboratory. This article highlighted the complexity of evaluating diagnostic tests for FIV infection. Test validity varies with the population tested, cat health status, time since infection, PCR methodology, lab equipment, quality of reagents, and what FIV strains are predominant in the population. Practitioners should consider whether the PCR test available to them has been independently validated in the context of their patient population—in both sick and healthy cats and in FIV vaccinates and nonvaccinates.
—*Susan Little, DVM, DABVP (Feline)*

Source

Validation of real-time polymerase chain reaction tests for diagnosing feline immunodeficiency virus infection in domestic cats using Bayesian latent class models. Morton JM, McCoy RJ, Kann RKC, et al. ***PREV VET MED*** 104:136-148, 2012.