Veterinary Health Center
AT KANSAS STATE UNIVERSITY
TO DISCOVER. TO TEACH. TO HEAL.

Evaluation of serum amyloid A in cats diagnosed with histoplasmosis

Histoplasmosis is a fungal disease commonly seen in cats living in particular geographic regions. Cats are infected after inhalation of fungal particles in the soil. After infection, various body systems can be affected, resulting in non-specific signs of illness. How sick a cat gets from infection depends on the number of particles inhaled and the cat's immune response to the fungus.

Specific proteins are released by the body during the initial stages of infection that help regulate how the body's immune system responds to the infection. Serum amyloid A (SAA) is one such protein in cats that rapidly and significantly increases with infection but decreases in the same manner when the infection is resolved.

This study aims to answer two questions: What is SAA's response in cats affected by histoplasmosis? How will the SAA concentration change in response to treatment of histoplasmosis? To achieve this the concentration of SAA will be measured in blood samples drawn from cats with histoplasmosis and then compared to blood samples from cats without the infection. The presence of fungal particles in the cat's urine and blood during different phases of treatment and monitoring will be related to changes in SAA concentrations.

Based on previous work looking at SAA in cats with a variety of diseases, it is expected that SAA will be higher in cats with histoplasmosis and reflect changes in the severity of the infection. If SAA is shown to be a relevant indicator of disease in these cats, further studies can be done to assess how useful it will be in monitoring the response to treatment and return of infection after apparent recovery.

The optimal treatment plan for these cats and time to discontinue treatment is still unclear. Even with long-term treatment, a substantial number of cats show the return of disease or succumb to histoplasmosis. Serum amyloid A measurement may enable individualized treatment of cats with histoplasmosis and thereby improve the outcome in these cats.

Purpose: In this investigation we want to determine whether cats with histoplasmosis have changes in a specific blood protein (serum amyloid A) that is responsible for regulating their immune response to the infection. We also want to determine whether serum amyloid A (SAA) concentrations will change with treatment of histoplasmosis.

Explanation: At your first visit to the hospital a complete history of your cat’s illness will be taken and a physical examination performed. Routine blood and urine tests, screening for

infectious diseases and diagnostic imaging (abdominal ultrasound and/or chest radiographs) will be done as part of the general internal medicine work-up. Should the results of our routine testing be suspicious for histoplasmosis, we will offer you the opportunity to enroll your cat in our study. From the blood and urine already collected, additional confirmatory testing will be done before final inclusion in the study.

Clinical Protocol: Blood and/or urine and/or diagnostic imaging will be done over the course of 7 visits in the next 6 months. These tests are routinely done as part of the treatment and monitoring of histoplasmosis after diagnosis. Because you agreed to take part in our study, some of the costs for these follow-up visits will be covered by the study.

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Eligibility:

Inclusion criteria:

1. Client-owned cats presenting with clinical signs or evidence of organ system involvement consistent with histoplasmosis
2. Confirmation of histoplasmosis with definitive testing.
3. Cats of any age, breed or sex, weighing at least 3 kg.
4. The owner's consent was obtained.

Exclusion criteria:

1. Prior treatment with antifungal drugs
2. Short-acting steroidal or non-steroidal anti-inflammatory treatment (oral, parenteral, or topical formulations) within the preceding 14 days or long-acting formulations within the preceding 30 days.
3. When the nature of the cat does not allow for repeated restraint, handling, or administration of medication at home.
4. The presence of significant other disease conditions
5. Overweight cats with body condition score of > 7/9

Fees for Services: The cost of the initial work-up, including the consultation, blood work, diagnostic imaging, eye consultation and any treatment or hospitalization fees will be at the cost to the owner. For recheck visits, the owner will be responsible for the costs of treatment and follow-up diagnostic imaging and eye consultations if necessary.

Owner Responsibilities: If you agree to participate in the study, you are expected to administer all medication as prescribed and be able to present your cat for scheduled recheck visits. Should there be any need for deviation from the prescribed schedule or instructions, you are asked to contact the principal investigator in advance to discuss possible options.

For questions or concerns regarding this study, please contact either:

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