Poster presentations

Sequencing of the Janus kinase 2 gene in cats with primary erythrocytosis

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OBJECTIVES

Primary erythrocytosis (PE) is a rare myeloproliferative disease in cats. Polycythaemia vera of man may represent a homologous disorder; this is most commonly due to a mis-sense variant (c. 1849G > T; p. V617F) in exon 14 of the Janus kinase 2 gene (*JAK2*), with many of the remainder having variants in exon 12. Variants in canine *JAK2* exon 14 have been described in a dog with PE. The

aim was to partially sequence *JAK2* in cats with PE to establish if similar variants account for the feline disorder.

METHODS

DNA was purified from whole blood collected from three cats diagnosed with PE. Primers were designed to amplify exons 12 and 14 of feline *JAK2* corresponding to the common variants detected in humans and dog. Amplified DNA was purified and sequenced.

RESULTS

Usable sequence data were obtained for two of the three cats for exon 12. Usable sequence data were obtained for all three cats for exon 14. No variants were detected within either exon 12 or exon 14 of feline *JAK2*. Single nucleotide polymorphisms were identified within the fragments of flanking intronic sequence; however, these are of unknown significance.

STATEMENT (CONCLUSIONS)

Causative variants in *JAK2* commonly associated with polycythaemia vera in human patients were not detectable in exons 12 and 14 of feline *JAK2* amplified from whole blood DNA obtained from two to three cats with PE. This could reflect alternative causative variants or suboptimal cell populations as a DNA source.

Suitability of commercial human rheumatoid factor rapid tests for detection of rheumatoid factors in dog serum

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OBJECTIVES

The diagnosis of rheumatoid arthritis can be supported by detection of serum rheumatoid factors (RF), autoantibodies directed against IgG immunoglobulins. Rapid tests are commercially available, time-saving, and would be useful in veterinary practice. However, it is unclear if RF tests developed for human RF detection are suitable to detect canine RF.

METHODS

In total, 7 and 3 rapid tests based on Waaler Rose haemagglutination and latex agglutination principles, respectively, were examined (further information available on request). We used 12 dog sera tested positive ($n = 6$) or negative ($n = 6$) with the routine method used in the author's lab (Waaler Rose principle, sensitivity 86%, specificity 97.9%). According to the manufacturer's recommendations, sera were mixed with reagent and slides examined macroscopically for presence of agglutination after 2–3 min of incubation. When agglutination occurred, sera were diluted 1:10 to exclude false positives due to heterophil antibodies.

RESULTS

We verified that a human serum tested positive with the routine method was positive with all rapid tests. Noticable, this serum was clearly positive applying latex agglutination tests which use particles coated with species-specific IgG to detect agglutination. In contrast, a prolonged incubation time of 5–8 min was needed for clear agglutination in tests using the non species-specific Waaler Rose principle based on sheep erythrocytes sensitized with rabbit IgG. However, all 12 dog sera were tested negative with all rapid tests.

STATEMENT (CONCLUSIONS)

The investigated rapid tests are not suitable for the detection of RF in dog sera, thus specialized laboratory testing for canine RF is recommended

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