

Supplementary Information 6: Evidence Narratives for Additional Feline Infections

Vector-borne agents

Leishmaniasis

One case report identified a cat with visceral leishmaniosis and concurrent pancytopenia thought to be of immune-mediated origin,¹ yielding an IME value of 2.62. The cat had persistent autoagglutination, and *Leishmania* amastigotes were identified in the bone marrow, peripheral blood, and other body tissues.

Consensus Summary Statement: The available evidence for *Leishmania spp.* as a cause of IMHA in cats is negligible. However, given the lack of data, the role of this pathogen in the pathogenesis of feline IMHA cannot be ruled out.

Viral infections

Feline immunodeficiency virus (FIV)

One study by Limlenglert *et al* was evaluated.² This study did not ask whether IMHA was associated with infection. Five cats were Coombs'-positive; of these 5 cats, 3 were FIV-positive. Of the 3 Coombs'-positive, FIV-positive cats, 1 cat was also FIP-positive.

Consensus Summary Statement: Available evidence that FIV infection induces IMHA is negligible. Further study is required to determine if IMHA contributes to anemia in some FIV-infected cats.

Feline infectious peritonitis (FIP)

A total of 3 studies were evaluated.²⁻⁴ Each of the studies identified at least 1 cat with a Coombs'-positive anemia and FIP infection. In the study by Limlenglert *et al*, the FIP-infected cat was also infected with FIV; an IME value could not be assigned. The remaining 2 studies were respectively associated with IME values of 2.20 and 3.62.^{3,4}

Consensus Summary Statement: The overall evidence that FIP infection induces IMHA in cats is negligible. However, given the immune mechanisms underlying effusive FIP, combined with the lack of conclusive studies, a role for this virus in IMHA cannot be ruled out. Of note, false positive Coombs', saline agglutination, and flow cytometric assays for surface antibody may hypothetically occur as a consequence of non-specific antibody adsorption to RBCs.

Bacterial infections

Localized bacterial infections

Few cases of cats with focal bacterial infections suspected to cause IMHA have been reported in the literature.³⁻⁵ Owing to the presence of multiple co-morbidities in individual cats, an IME value (1.70) could only be assigned for abscessation.

Consensus Summary Statement: Similar to the situation in dogs, the evidence for localized bacterial infections inducing IMHA in cats is negligible, but is difficult to evaluate from available studies. Bacterial infection cannot be ruled out as a cause of IMHA in cats, and further investigation of this possibility may be warranted.

Mycoplasma gatae

Non-hemotropic *Mycoplasma spp.* have been associated with IMHA in some species.^{6,7} One case report describes a cat infected with *M. gatae* that initially developed signs of inflammatory joint disease and shortly after developed a Coombs'-positive anemia,⁸ suggesting that *M. gatae* was the causative agent. The IME value for this study was 3.82.

Consensus Summary Statement: The evidence for *Mycoplasma gatae* causing IMHA cats is low, and currently limited to a single case report. Based on the observation that *Mycoplasma spp.* infection cause cold agglutinins in other species, *M. gatae* may be considered as a possible etiology of feline IMHA, but further studies are needed to confirm this possibility and the clinical significance of cold agglutinins in cats.

References

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