Small animal *Review*

Summary: In this month's Small Animal Review we summarise three papers from other Veterinary journals, focusing on the field of parasitology. The first paper looks at the potential of isoxazolines for treating ectoparasites in degus. The second considers the prevalence of *Leishmania* in stray cats in Spain and the third describes a case of meningioencephalitis in a dog imported into the UK infected with *Ehrlichia canis.*

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Efficacy of selamectin and sarolaner in treating mite infestations in *Octodon degus*

The degu is a small rodent, endemic to central Chile, that is becoming an increasingly common pet and visitor to UK veterinary practices. Ectoparasite infestations are not common in degus but can occur either as a result of groups living in close proximity, or secondary to other disease. Isoxazolines have shown much promise in the treatment of mite infestations in cats and dogs and are now licensed for this purpose. This raises the possibility that they may also be safe and efficacious in rodents. Beck et al (2021) presented two cases of mite infestation in domestic degus, where Stronghold Plus® (selamectin and sarolaner topical solution) was a successful treatment. In the first case a 2-year-old female degu, housed in a group with four other degus, presented with pruritis, restlessness and alopecia. *Demodex* spp. mites were identified from deep skin scrapings. All four degus were treated with Stronghold Plus® (30 mg/kg selamectin and 5 mg/kg sarolaner) once a week for 6 weeks, with resolution of clinical signs within 2 weeks of treatment. Skin scrapes from the affected degu were negative for mites from day 14 onwards. In the second case, a group of four degus that were housed together were infested with *Ornithonyssus bacoti*. All the degus were treated with Stronghold Plus® weekly for 4 weeks. One week later, no living mites were found on the degus or in their environment. The medication was well tolerated by all treated degus, with no visible side effects and excellent treatment outcomes. This treatment combination shows promise in the treatment of both ectoparasites in degus and other rodent species kept as pets.

Leishmania infantum infection in stray cats in Spain

Feline leishmaniosis is a vector-borne parasitic disease caused by *Leishmania* spp. *Leishmania infantum* infection is prevalent in dogs in the Mediterranean basin and is being seen increasingly in dogs imported into the UK from this region. Groups such as the European Council for Companion Animal Parasites (ESCCAP) promote routine screening of dogs imported from Southern Europe for *Leishmania infantum* because of its potential to cause chronic and life-threatening disease in infected individuals, even months or years after initial infection. Less is known about the prevalence found in cats rescued from the region and imported into the UK, so this study from Alcover et al (2021) looking at the prevalence of the parasite in stray cats in Spain is timely.

The prevalence of *Leishmania* infection was studied in apparently healthy stray cats captured in urban and peri-urban areas of Zaragoza, Spain. Blood was collected from each animal for serology and molecular analysis. Three serological methods, the immunofluorescent antibody test (IFAT), enzyme-linked immunosorbent assay (ELISA) and western blot (WB), were used to detect *L. infantum* antibodies and a real-time PCR (qPCR) assay was used to detect *L. infantum* DNA.

Of the cats tested, 2.2% were positive for *Leishmania* infection by IFAT, 2.8% by ELISA and 14.5% by WB. *Leishmania* DNA was detected by qPCR in 5.6% of the cats. A total of 16 cats (8.9%) tested positive by only one serological technique, four tested positive by all three serological methods but only two cats tested positive by all the diagnostic methods. A significant association was found between male cats and a positive qPCR result. There was an association between feline immunodeficiency virus (FIV) status and *Leishmania* infection but not with feline leukaemia virus (FeLV) infection. This study demonstrates the need to screen for *Leishmania* in clinically healthy imported cats from Spain and that infection may be more likely in male cats and those that are positive for FIV. It also demonstrates that a range of diagnostic tests may be required to identify infection.

Meningoencephalitis in a dog seropositive for *Ehrlichia canis*

Diagnoses of *Ehrlichia canis* in the UK are increasing as a result of increased dog importation and the expanding geographic prevalence of the parasite across Europe. Reported clinical cases are still sporadic and often difficult to diagnose because of the variety of clinical presentations. This case reported by Di Dona et al (2021) presented with thrombocytopenia, which is a common sign in acute and chronic cases of ehrlichiosis. The acute presentation of non-ambulatory tetraparesis and severe obtundation in this case is the first described for ehrlichiosis. Other common signs such as fever, lymphadenopathy and weight loss were absent. Magnetic resonance imaging findings showed multifocal intra-axial changes centered in the grey matter. The lesions caused mild mass effect and leptomeningeal contrast enhancement. Testing with an IFAT is considered the serological gold standard in diagnosing clinical ehlichiosis and this dog was positive by quantitative IFAT. The dog responded to prednisolone and doxycycline treatment, with progressive reduction of antibody titres detected on the IFAT and complete resolution of the clinical signs. This case shows the importance of considering ehrlichiosis as a differential in dogs with travel history, as well as those with thrombocytopenia and meningoencephalitis.

References

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