HOLMER VETERINARY SURGERY

Autumn 2021 Newsletter

Welcome to our Autumn 2021 newsletter. It seems impossible to believe that we are already through three quarters of the year, time has just flown by. We had hoped to be inviting clients back into the building by now but, sadly, the building work has not moved on quite as quickly as we had anticipated. We have resigned ourselves to the fact that not all that should be sparkly and new will be completed, but hope to have the waiting room and reception up and running in the next few weeks
(fingers and toes crossed). As we welcome you back in face masks will not be compulsory but we would prefer you to wear them whilst in the waiting area. We fully accept that not everyone will be comfortable waiting inside and some of you may prefer to wait in the car for you appointment.

At this time of year we advise clients with pets who have a fear of fireworks to start preparing for the season. An article on fear of fireworks can be found on our Autumn 2019 newsletter, please do hesitate to call to speak to us about your individual dogs needs.

For this newsletter we thought we would take a look at canine infectious respiratory disease complex, more commonly known as kennel cough, for which we have seen a number of cases the last several weeks. For our second article we look at Feline Infectious Peritonitis caused by feline coronavirus for which a new and exciting treatment has just recently become available.

As always, if you have any topics you would like to see discussed in future newsletters please let us know.

Canine infectious respiratory disease complex

Canine infectious respiratory disease complex (CIRDC), previously referred to as kennel cough (KC), is a complex disease involving a variety of viruses and bacteria. Whilst historically cases were predominantly seen in dogs which had been in kennels there are many other dog socialising activities (Day-care, puppy parties etc.) where transmission rate of the pathogen/s can be increased, equally individual dogs can contract CIRDC as easily as humans can catch a cold, even without attending to a group event.

More than 20 different infectious agents have been identified that appear to be involved in CIRDC. Historically Bordetella bronchiseptica (Bb, which belongs to the same group of bacteria which causes whooping cough in humans), canine adenovirus-2 (CAV-2), canine distemper virus (CDV) and canine parainfluenza virus (CPiV) were identified as the major causative agents of CIRDC. Newer pathogens that have been implicated in causing disease include canine influenza virus (CIV), canine respiratory coronavirus (CRCoV, which is distinct from human coronavirus), canine pneumovirus, mycoplasma and Streptococcus zooepidemicus (a normal commensal of healthy horses, with infection most typically occurring in dogs who have been in contact with them).

Clinical signs

Clinical signs of CIRDC are influenced by the host immunity, the infectious agent/s and environmental factors (risk of exposure). Not all dogs exposed to CIRDC will have symptoms but are asymptomatic carriers, able to transmit disease to others. Signs of CIRDC are usually mild and self-limiting with symptoms usually resolving within 2 weeks or less.

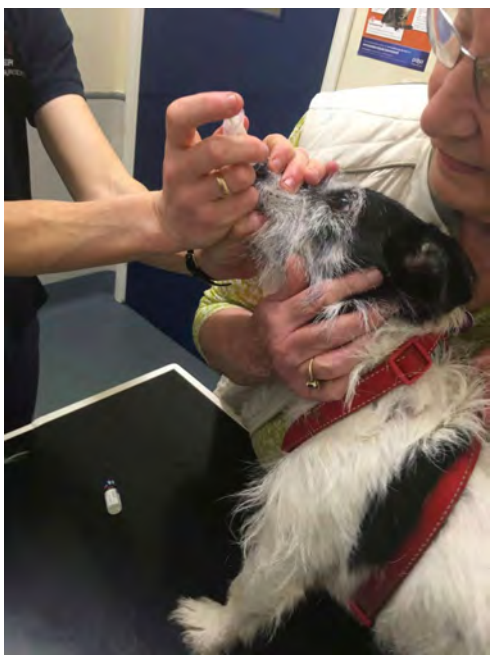
Infected dogs tend to develop a sudden onset productive upper airway cough, which typically comes in bouts. Nasal discharge and occasionally vomiting can be seen in some dogs, however, most remain otherwise well in themselves. Less commonly animals, particularly immunocompromised individuals, can develop secondary infections which can result in pneumonia, dyspnoea (difficulty breathing) weight loss and, extremely rarely, death. Some individuals may develop long term consequences of chronic respiratory disease.

Diagnosis

Diagnosis is made on clinical presentation. Many of the pathogens involved in CIRDC are also found in healthy dogs so nose and throat swabs are of limited value. Blood tests will demonstrate previous exposure to the infectious agents but not differentiate a current or previous infection. Chest radiographs are reserved for patients who are extremely unwell, have signs of dyspnoea or fail to respond to treatment, to rule out other possible causes for the symptoms.

Treatment

The majority of cases of CIRDC are viral in cause so symptomatic therapy may include anti-inflammatories and mild anti-tussives, many patients require no treatment at all. Where an animal presents with a fever, is unwell or where symptoms suggest a lower respiratory tract involvement, as well as for suspect cases of Bb, antibiotics are indicated.



Prevention

Only a small number of pathogens that can cause CIRDC can be vaccinated against. CDV and CAV-2 are included in routine inoculations, Bb and CPiV are components of the intranasal KC vaccine, a herpes vaccine is available but is not routinely used for prevention of CIRDC. Akin to human flu and coronavirus vaccination use of KC vaccine aims to reduce the severity of illness and reduce shedding/transmission of infectious agent/s. Recently an oral KC vaccine has been made available but only gives immunity against Bb and onset of immunity is much slower than the intranasal version.

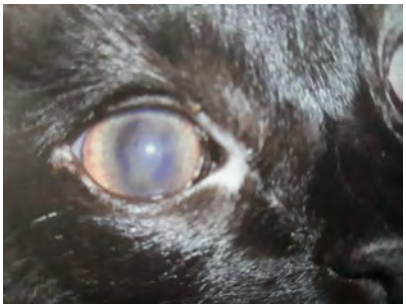
Feline Infectious Peritonitis (FIP)

Feline Infectious Peritonitis (FIP) is caused by virulent mutation of feline coronavirus. Feline coronavirus (FCoV) is distantly related to SARS-CoV-2, the agent which causes coronavirus in humans, and cannot itself affect humans. Infection with FCov is common in cats, typically kittens, who are infected by ingesting the virus which is spread via faeces. In the majority of cats the FCoV remains contained within the gastrointestinal (GI) tract with infected individuals suffering GI symptoms, typically self limiting diarrhoea, some have no symptoms at all. Less commonly, but more critically, in 5-10% cats the virus mutates so that it is able invade white cells, called macrophages and monocytes, enabling the virus to leave the cats gastrointestinal tract and move systemically with FIP resulting. It is considered extremely rare for FIP to be transmitted between cats. How the cat's immune system responds to the virus determines what symptoms develop. Cats mounting a strong cell mediated immunity (CMI) to the virus are considered protected against FIP, cats with only moderate CMI typically develop dry FIP whilst cats producing mainly antibody-mediated immunity develop wet FIP. Cats with FIP can develop both wet and dry symptoms as their disease progresses. Historically FIP infection in cats has usually been fatal.

Signalment (which cats are more likely to be affected).

Cats suffering FIP are typically young (usually less than 2 years old) with pedigree cats and those from multi cat households being more likely to suffer the disease. The strain of FCoV, dose of virus and concurrent stress (including weaning, vaccination, neutering, concurrent disease) all have potential influence on whether an individual succumbs to FIP.

Clinical signs



Wet FIP cases develop protein rich fluid accumulation in the abdomen or chest. Dry FIP cases can be more difficult to recognise and inflammatory masses can occur in any tissue including the abdomen, chest, eye, brain or spinal cord, which organ is affected influencing what clinical symptoms the individual will suffer (GI, respiratory or heart issues, eye inflammation, neurological signs).

Non specific signs are also common, affected cats often being lethargic, anorexic with either weight loss or failure to gain weight. A fluctuating high temperature is usually detected and a mild icterus (yellow tinge to the tissues) can be sometimes be identified.

Diagnosis

Diagnosis of FIP is challenging and historically could only be made on post mortem. An algorithm considering multiple factors was used to determine if FIP was more or less likely in an individual. For many cats a combination of changes in the blood tests, especially high levels of globulins (antibodies), and abnormalities detected on imaging (abnormal fluid or masses), in a young cat with appropriate symptoms means a diagnosis of FIP should be strongly considered. A definitive diagnosis can still be challenging but special tests performed on fluid samples and/or tissue samples have made it possible to get an 100% diagnosis for many FIP cats.

Treatment

Only recently has an effective treatment for FIP become available. Remdesivir, is an antiviral drug which has just this year become licensed in the UK. Currently only an injectable form of treatment is available which must be given once a day for 84 days. The injections can be painful so careful use of analgesics and local anaesthetic treatment is often required. Unfortunately, the cost of treatment for FIP is high, in the region of £2,500 a course for a 2kg cat. As well as using the antiviral treatment individual cats may need additional supportive treatment to manage their symptoms.

Prognosis

The prognosis for cats with FIP, which until now was a death sentence for the majority of affected cats, is looking good. So far response rates of 85-90% have been reported in cats treated with Remdesivir. Some cats can suffer relapses and require repeat therapy so ongoing monitoring is necessary after treatment.