Animal &
Plant Health
Agency

Small Animal Expert Group
Annual Summary 2023

Overview

The Small Animal Expert Group (SAEG) works collaboratively to gather, analyse, and share information on small animal health surveillance. SAEG non-APHA members include representatives from British Small Animal Veterinary Association (BSAVA), Cats Protection, Heathrow Animal Reception Centre (ARC), Defra trade team, Dogs Trust, RSPCA, Small Animal Veterinary Surveillance Network (SAVSNET) at the University of Liverpool, VetCompass at the Royal Veterinary College and the Veterinary Medicines Directorate (VMD). The group discusses potential risks and threats to the small animal population including those diseases that are zoonotic and pose a potential risk to public health, collaborating with experts in the field, and is a central hub of communication.

Intelligence gathered on emerging and significant small animal issues is fed both into and out from government. SAEG intelligence comes from various sources, including veterinary professionals who act as an early warning system by reporting unusual cases or by engaging with groups collating and anonymizing clinical records and laboratory data. As valuable assets within a complex surveillance network, veterinary professionals are encouraged to maintain a population perspective, flag changes in disease trends, and always consider zoonotic potential as part of their differential diagnosis.

2023 Potential Risks and Threats

The SAEG aims to detect, investigate, and characterise new and reemerging threats in Great Britain (excluding Northern Ireland)'s small animals. The following diseases represent some of the noteworthy potential risks and threats covered by the SAEG and wider intelligence network in 2023.

Feline Infectious Peritonitis

In the first quarter of 2023, veterinarians in Cyprus reported an increase of Feline Infectious Peritonitis (FIP) cases and in geographic spread. A team of researchers from the University of Edinburgh and the Roslin Institute, providing support to colleagues in Cyprus, investigated samples from these cases. Samples sequenced demonstrated a level of similarity highly suggestive of transmission of the virus, suggesting a "hot-strain" or a strain of feline alpha coronavirus (FCoV) that is more likely to develop into FIP and cause FIP in other cats. In August, a kitten in Great Britain with links to Cyprus, was diagnosed with FIP and subsequently found to be infected with the same recombinant strain of FCoV. The kitten received informed care, with prompt treatment including the anti-viral, GS-441524, and biosecurity advice to prevent the potential for onward transmission. The kitten has since made a full recovery, and no additional cases have been reported in Great Britain.

References

Warr A, Attipa C, Gunn-Moore D and Tait-Burkard C. (2023) 'FCoV-23 causing FIP in a cat imported to the UK from Cyprus' Veterinary Record, volume 193: pages 414-415 (viewed on 12 November 2024).

Attipa C, Warr AS, Epaminondas D, O'Shea M, Hanton AJ, Fletcher S, Malbon A, Lyraki M, Hammond R, Hardas A, Zanti A, Loukaidou S, Gentil M, Gunn-Moore D, Mazeri S, and Tait-Burkard C. (2024) 'Emergence and spread of feline infectious peritonitis due to a highly pathogenic canine/feline recombinant coronavirus' bioRxiv, 2023.2011.2008.566182 (viewed on 12 November 2024)

Influenza A(H5N1) in pets

Two outbreaks of the highly pathogenic avian influenza H5N1 in cats were reported outside of Great Britain in 2023. In June, the World Health Organisation (WHO) was notified of unusual deaths in cats across Poland. By July, 34 cats tested positive for influenza A(H5N1). The genetic sequencing indicated these cats were infected with the H5 2.3.4.4b clade and were similar to A(H5N1) clade 2.3.4.4b viruses which had been circulating in the wild bird population and had caused poultry outbreaks in Poland. The

cats were presenting with acute respiratory and neurological signs or were found dead. The cats were a mix of primarily indoor cats with partial outdoor access, and some were primarily outdoor cats with potential wild bird exposure. Some infected cats were noted to have been fed raw poultry which has been considered as a possible source of infection, but to date no one source has been identified with certainty. There was no evidence of the virus spreading from cat to cat, and no humans were infected.

In July and August, cats at two cat shelters in Seoul, South Korea, tested positive for avian influenza A(H5N1). Nine cats were confirmed (5 from the first shelter, and 4 from the second), with up to 38 cats reported to have died at the first shelter. The cats were reported to have been found dead or displaying respiratory signs. An epidemiological investigation at the second shelter found influenza A(H5N1) virus in improperly sterilized cat food containing duck meat. None of the cats had outdoor access, and the most likely source of infection was the contaminated duck meat.

It is well established that cats are susceptible to Influenza A(H5N1), a potentially zoonotic pathogen. Throughout 2023, there were a handful of spill-over events in pets infected with A(H5N1). In France, a cat living on a poultry farm tested positive at the start of the year. In the USA, cases of A(H5N1) were reported in domestic cats (12) in Oregon (1), Nebraska (3), Wyoming (1), Montana (1) and South Dakota (6). Strains EA H5N1 (the Eurasian strain) and EA/AM (a reassortment of H5 goose/Guangdong and North American wild bird lineage) were detected in Nebraska, with the EA H5N1 strain also detected in South Dakota and the EA/AM strain detected in the remaining states of Montana, Oregon and Wyoming. Two of the detections in Montana and South Dakota were found in cats on HPAI affected poultry premises, with the cats in Montana found in a chicken coop displaying neurological signs. The full report is available on the World Animal Health Information System (WAHIS) website. In Canada, confirmed cases included a dog found eating a dead goose (March 2023) and 2 cats on a beef cattle farm (December 2023) the full report is available on the WAHIS website. The outbreaks in Poland and South Korea however suggested a route of transmission of the virus that could impact a larger number of pets than previously thought.

In all these cases, various clinical signs reported including anorexia, lethargy, pyrexia and dyspnoea within a few days after infection. Neurological signs are also often seen but can vary depending on the part of the brain the virus affects. Clinical signs can include ataxia, anisocoria, nystagmus, tremors, hyperaesthesia, and eventually seizures and death. Disease progression is often rapid and should be suspected based on clinical presentation along with the presence of a risk factor such as consuming infected raw poultry or wild bird

or having access to the outdoors in an area where Influenza A(H5N1) in wild birds has been detected.

Suspicion of infection of Influenza A(H5N1) in a UK pet is notifiable. Read guidance on suspect case definition and diagnostic testing criteria for Influenza A (H5N1) infection in mammals.

Use the Avian Influenza in Wild Birds interactive data dashboard to view positive findings of avian influenza in wild birds, provided by APHA.

References

Domańska-Blicharz K, Świętoń E, Świątalska A, Monne I, Fusaro A, Tarasiuk K, and others. (2023) 'Outbreak of highly pathogenic avian influenza A(H5N1) clade 2.3.4.4b virus in cats, Poland, June to July 2023'. Eurosurveillance. Volume 28, Issue 31:2300366 (viewed on 12 November 2024).

Kim I, Nam J, Kim C, and others. (2024) 'Pathogenicity of Highly Pathogenic Avian Influenza A(H5N1) Viruses Isolated from Cats in Mice and Ferrets, South Korea, 2023'. Emerging Infectious Diseases. Volume 30, Issue 10, pages 2033-2041 (viewed on 13 November 2024).

Kim Y, Fournié G, Métras R, Song D, Donnelly CA, Pfeiffer DU, and others. (2023) 'Lessons for cross-species viral transmission surveillance from highly pathogenic avian influenza Korean cat shelter outbreaks'. Nature Communications. Volume 14, Issue 1, page 6958 (viewed on 12 November 2024).

Linguatula serrata

In March 2023, the joint APHA and ESCCAP UK & Ireland surveillance project on exotic worm and worm-like parasites identified what is thought to be the first case of *Linguatula serrata* in a dog with no history of travel outside Great Britain. *L. serrata* is a nasal pentastomid ("worm-like") parasite that can cause mild to severe rhinitis in dogs, though infection is often subclinical. The adult stage (Figure 1) resides in the dog's nasopharynx, releasing eggs that are shed in either the dog's faeces or in the dog's nasal discharge. Intermediate hosts ingest these eggs from which nymphs develop and encapsulate in lymph nodes, liver, lungs and occasionally the eye. The cycle completes as definitive hosts (mostly carnivores) are infected by eating infected tissues from the intermediate host containing the encapsulated nymph stage. These nymphs in host tissue are effectively killed by freezing or cooking.

The source of the infection in this UK case was unable to be determined, though the dog was reportedly fed raw meat. The owner was given advice and potential zoonotic

transmission was reduced through treating the dog, hygiene measures, and advice to stop feeding a raw diet.

Figure 1: Macroscopic view of adult *Linguatula serrata* (Image courtesy of Pedro Serra)

More information can be found in the Exotic Worm and Worm-like Parasite Surveillance section of this document and on the European Scientific Counsel Companion Animal Parasites website. You can read about tongue worm in an untravelled dog in the UK in the Veterinary Record.

Brucella canis

In 2023, there were 187 epidemiologically separate incidents where evidence of infection with *Brucella canis was* reported to the APHA *Brucella* National Reference Laboratory. Further information is available in the APHA Zoonoses and Veterinary Public Health quarterly and annual reports.

APHA updated the Canine Brucellosis Summary information sheet and published a question-and-answer document on frequently asked *B. canis* questions. BSAVA also published a *B. canis* scientific document on the BSAVA library. Further work in relation to risk to the UK human population included the publication of the Human Animal Infections and Risk Surveillance (HAIRS) group *B. canis* risk assessment.

More information including appropriate mitigations can be found at the following links:

Zoonoses and Veterinary Public Health Annual Report 2023

Disease Information (Click on either “Brucella canis (Canine brucellosis): summary information sheet” or “Frequently asked *Brucella canis* testing questions”)

HAIRS risk assessment: Brucella canis

Brucella canis: information for the public and dog owners

BSAVA *Brucella canis* Hub

BSAVA *Brucella canis* Scientific Information Document (SID)

Horizon scanning

Horizon scanning is a form of surveillance used to detect risks and threats across the world, but which pose a potential threat to the UK pet population.

Europe

Corynebacterium ulcerans – Ireland

February 2023: Outbreak of *Corynebacterium ulcerans* in domestic cats. *C. ulcerans* is a zoonotic pathogen causing diptheria-like illness in humans. In the UK, occasional cases in people and animals are investigated. Guidance on the public health management of *C. ulcerans* in companion animals is available on gov.uk.

For more information read HSE warns vets about outbreak of diptheria-like disease on agriland.ie and the Veterinary Council of Ireland newsletter.

Rabies – France

December 2023: Confirmed rabies in illegally imported dog and cat. Border collie puppy (born 20 August 2023) was illegally imported on 16 December from Morocco. Digestive clinical signs were first detected on the 20 December. A cat associated with the confirmed dog also tested positive. The full report is available on the WAHIS website.

Bluetongue – Netherlands

December 2023: Bluetongue virus-3 (BTV-3) was detected in a pregnant dog living on a cattle farm. The farm was not a known infected premises and subsequent testing of the livestock revealed 2 BTV-3 positive cows. The dog was very ill, and additional testing for *Brucella spp.* was negative. Possible routes of infection include eating raw meat or the afterbirth from BTV-infected ruminants, or drinking colostrum contaminated with BTV-containing blood. Transmission through midges could not be ruled out. Bluetongue remains a very rare infection for dogs (most reported cases have been in pregnant dogs). Dogs are considered dead-end hosts and do not play a role in the transmission of BTV. Read more information on the Wageningen University and Research website.

Elsewhere in World

Canine Infectious Respiratory Disease Complex (CIRDC) – USA

Autumn 2023: Reports of atypical CIRDC cases across multiple nonadjacent states in the USA. No definitive cause has been found. Preliminary diagnostic investigation by the New Hampshire Veterinary Diagnostic Laboratory noted a novel bacterial pathogen in 31/226 dogs, while the USDA genetic testing showed common causes of canine infectious respiratory disease in the cases investigated. Colorado State University researchers investigated a spike in canine respiratory disease and Oregon Veterinary Medical Association provided these updates.

Canine Influenza – USA

January, April 2023: Outbreaks of canine influenza in the USA were reported sporadically across multiple states. Two virus cause Canine influenza: H3N8, originally found in horses, and H3N2. Both of these subtypes are endemic in the USA but absent in the UK.

Read this article from the Minnesota Board of Animal Health and this media report from Fox5 Atlanta, Georgia for more information.

Streptococcus zooepidemicus – USA

January, March 2023: Outbreaks of *Streptococcus zooepidemicus* caused fatalities in dog shelters in the USA during the winter months of 2023. The source of the infection was not discovered though overcrowded conditions likely contributed to the rapid transmission.

Read media reports from NBC Palm Springs, California and Local10, Florida for more information.

Exotic Worm and Worm-like Parasite Surveillance

APHA and the European Scientific Counsel Companion Animal Parasites (ESCCAP) UK & Ireland are collaborating to encourage diagnosis and reporting of exotic worms and worm-like parasites in dogs. The exotic worm and worm-like parasite project offers free-of-charge morphological identification of 3 potentially zoonotic parasites: *Linguatula serrata* (“Tongue worm”), *Thelazia callipaeda* (“Eye worm”), and *Dirofilaria repens* (“Skin worm”). The collaborative project aims to encourage diagnosis and reporting of these parasites. Sample specimens should be sent fresh or preserved in 70% ethanol (Please do not put

the parasites in formalin). Submissions can be made to APHA Carmarthen Parasitology by using the free identification of exotic worms in dogs form on gov.uk.

Small Animal Risks and Threats (SmART) Comms

The SAEG has launched a new communication tool for the timely notification of potential risks and threats in the small animal sector. The SmART Comms system (Small Animal Risks and Threats Communications) will keep veterinary professionals informed with prompt pet-related disease and health notifications. These notifications will be relevant and can be used to inform small animal veterinary practice decisions. This system is independent of existing notifiable disease alert systems.

By registering to receive SmART Comms you can decide how you wish to receive these notifications. Messages can be received via email, text message or both. If you wish to register to receive these notifications, then please email siu@apha.gov.uk with the email address you would like to register and/or the mobile telephone number if you wish to receive text alerts.

How to report a notifiable disease

Report it immediately by calling:

03000 200 301 if you're in England

- 03003 038 268 if you're in Wales
- your local Field Services Office if you're in Scotland

If you do not report it, you are breaking the law.

Additional Resources

Animal disease scanning surveillance at APHA - GOV.UK

Disease factsheets | BSAVA Library

Small Animal Veterinary Surveillance Network (SAVSNET) - University of Liverpool

VetCompass

APHA SAEG member organisations

- British Small Animal Veterinary Association (BSAVA)
- Cats Protection
- City of London Heathrow Animal Reception Centre
- Department for Environment, Food, and Rural Affairs
- Dogs Trust
- Royal Society for the Prevention of Cruelty to Animals (RSPCA)
- Small Animal Veterinary Surveillance Network (SAVSNET) University of Liverpool
- Veterinary Companion Animal Surveillance System (VetCompass™) at the Royal Veterinary College
- Veterinary Medicines Directorate

Data Protection:
For information on how we handle personal data visit www.gov.uk and search Animal and Plant Health Agency Personal Information Charter.

The report is available on GOV.UK at: https://www.gov.uk/government/collections/animal-disease-surveillance-reports.

Any enquiries regarding this report should be sent to APHA's Surveillance Intelligence Unit by emailing SIU@apha.gov.uk.

APHA is an Executive Agency of the Department for Environment, Food and Rural Affairs and also works on behalf of the Scottish Government, Welsh Government and Food Standards Agency to safeguard animal and plant health for the benefit of people, the environment and the economy.