

Veterinary Medical Writing

SECTION EDITOR



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Editorial

All three articles in this Veterinary Medical Writing section were written when COVID-19 was not classified as a pandemic. Yet all three articles tie into the current narrative of regulation in veterinary medicine and the need

for communication between human and veterinary medicine. This could be seen as a coincidence, but I like to think that the members of EMWA are ahead of their time when it comes to trends in medical communication. I will let you be the judge. Thank you very much to our

regular contributors Beatrix Doerr and Cemile Jakupoglu and a special thank you to Henry Smith who was kind enough to give us valuable insight into “One Health” as it is implemented in Japan.

Karim Montasser

Research in veterinary medicine takes off!

Do you remember my September 2019 article where I wrote about the need for data sharing in veterinary medicine and suggested that veterinary research could learn from the experience gained in humans?¹

Meanwhile, veterinarians have taken this idea even further. It gave me great pleasure to learn that in November 2019, the Texas A&M University College of Veterinary Medicine & Biomedical Sciences and the University of Washington School of Medicine launched a large project studying ageing in dogs. This project goes beyond data sharing: it intends to create a community for dog owners, researchers, and volunteers. Dogs are nominated for participation by their owners, and data will be collected via questionnaires and the sharing of veterinary medical records. The project plans to include 10,000 dogs in an open-data platform

that can be accessed by scientists all around the world. It aims to contribute to the knowledge about ageing in dogs and – with that – is expected to also shed light on ageing in humans.²

Another exciting project relying on the participation of pet owners is the Darwin’s Ark project. It assesses the influence of genetics on health and behaviour. So far, more than 25,000 dogs have already been registered, and a similar project with cats is planned to be launched soon.³

Do you know of any similar veterinary projects involving data sharing, use of veterinary medical records, pet owner engagement, or other novel ways to gather data? Please do let me know!

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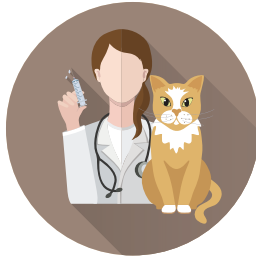
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Regulatory in veterinary medicine takes off!

As announced in the December 2019 *Medical Writing* regulatory news section, the new veterinary regulation was published in January 2019. It repeals Directive 2001/82/EC, while the equivalent Directive 2001/83/EC for human pharmaceuticals is still in place. Thus, this is the first time the European Council adopted a medicines regulation addressing veterinary medicinal products in particular. As stated in the preamble, the new regulation aims to adapt “the regulatory framework for veterinary medicinal products to scientific progress, the current market conditions, and economic reality, while continuing to ensure a high level of protection of animal health, animal welfare and environment and safeguarding public health”.¹

The new regulation shall meet the specific needs of the veterinary sector, which differs substantially from the human sector in its smaller commercial potential yet having additional considerations of a diversity of animal species and animal therapeutic needs.

Antimicrobial resistance is a global public health concern, and, therefore, in accordance with the “One Health” approach, prudent use of antimicrobials is required. In October 2019 the European Medicines Agency (EMA) published three main criteria that were recommended for the selection of antimicrobials to be restricted to human use, namely high importance to human health, risk of resistance transfer, and low importance to animal health.²

Changes in the new directive that are generally welcomed from an industry perspective include the removal of the requirement for

renewals of marketing authorisations (MA that will now be valid for an unlimited period) and opening up of the centralised procedure to more kinds of products (it will be open to any application for which an MA has not previously been granted in the EU through the National, Mutual Recognition or Decentralised Procedure).³ Other changes, such as the harmonisation of Summary of Product Characteristics, might result in a higher workload.

Advice on how to meet data requirements for novel therapies (such as gene therapy, regenerative medicine, tissue engineering, blood product therapy, phage therapy, nanotechnologies) was published by the EMA in August 2019,⁴ so vets go ahead!

There are plenty of other changes not detailed in this short insight. Will the new veterinary legislation succeed in meeting the aforementioned aims of the European Council? Let’s hope for the best!

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A tale of “One Health” from Japan: Veterinarians in the fight against severe fever with thrombocytopenia syndrome

“One Health” – the concept of optimal health for animals, humans, and the environment – is a familiar term to veterinarians, but how well is it known to the wider medical community? I used to have a rather sketchy idea of this concept, but that has been rectified since I started teaching Medical English at a vet school in Japan. Reading up on One Health in Japan for my job, I have come across a fascinating story on the role of veterinarians here in combating one particular emerging infectious disease. This story concerns a zoonotic viral disease first reported in China that currently lacks a cure, but it has nothing to do with COVID-19. The disease in question is called severe fever with thrombocytopenia

syndrome (SFTS), and efforts to counteract it have benefitted from a truly wide collaboration.

What is SFTS?

SFTS is dwarfed by COVID-19 in terms of geographical reach and also has a different viral lineage. It is an arthropod-borne banyangvirus seen in regions of China, South Korea, and western Japan where certain tick species are active. Despite its low prevalence, SFTS causes concern due to its high fatality rates, reportedly ranging from around 20% in humans to 100% in cheetahs.¹

The first case in Japan was reported in 2012, when a patient in her 50s was hospitalised for fever, fatigue, vomiting, and diarrhoea, with low WBC and platelet counts, and tragically succumbed one week later.^{2,3} Her doctors suspected viral infection, but they turned to the laboratory of veterinary infectious disease specialist Dr Ken Maeda at

Yamaguchi University for help in determining the cause of death. Dr Maeda’s team succeeded in isolating the virus in Vero and feline embryo cells, and the pathological diagnosis of SFTS for this human patient was subsequently confirmed through genome sequencing and real-time PCR analysis at other veterinary specialist laboratories. The rapid isolation and identification of the virus and the classification of SFTS as an emerging infectious disease in Japan became a significant news story here.

Crossing species boundaries

Three years later, two animal patients sadly made headlines. They were cheetahs at Hiroshima’s Aso Zoo that died in quick succession, with SFTS as the pathological diagnosis determined from tissue sample analysis (Figure 1). Tick bites were the probable cause of the first case, but cheetah-to-cheetah transmission could not be ruled out for the second case. However, the diagnosis of SFTS allowed zoo veterinarians to take appropriate action: the surviving cheetahs and other animals at the zoo were treated with acaricides and have remained free of SFTS ever since.

Transmission routes have also been questioned for human patients since some cases cannot be attributed to tick bites. Attention has



Figure 1. Deaths of two zoo-reared cheetahs due to SFTS announced on Japanese television news (All-Nippon Network News, August 18, 2017) The caption on the bottom of the screen reads “At a Zoo: Ticks? Two cheetahs dead”.



Figure 2. Public information pamphlet on SFTS for pet owners produced by the Kyoto Prefectural Government

This pamphlet educates pet owners on risks and prevention for this tick-borne disease.

thus been focused on the search for other vectors and sentinel species. For example, in one Japanese prefecture, SFTS seroprevalence in raccoons increased from 0% to nearly 50% between 2007 and 2016, foreshadowing the emergence of multiple human cases towards the end of that period. Similar surveys have been conducted for wild boar and deer, as well as stray cats and dogs.

The hunt for transmission routes has taken some surprising turns. One case report in 2019 involved a veterinarian – as the (fully recovering) patient. He had treated and necropsied three SFTS-positive cats and may have been infected through the exposure of the eye membrane to aerosol particles. Dogs show milder SFTS symptoms than cats, but they are seemingly another vector species. In 2017, national television news reported the transmission of SFTS from a pet dog to his owner through salivary contact with the eye membrane. Viewers were quickly reassured that “both the man and his pet have recovered”.⁵ Clearly a truly multidisciplinary medical team is required when two residents of the same house have the same disease but belong to different species.

A model for the One Health approach

The case of SFTS in Japan has been cited as a model of how a One Health approach should work,³ and it is easy to see why. Evidence has come from a staggeringly wide range of sources: practitioners in human medicine, veterinarians specialising in small animals, zoo animals, and wildlife population surveys, experts in virus isolation and sequencing, infectious disease

modelling, and tick biology, and public health officials (to name but a few). Following a comprehensive evaluation, this evidence has formed the basis for informational campaigns targeting both health professionals and the wider public. Armed with this information, physicians can now make quicker diagnoses of SFTS for both human and animal patients, and the public is better educated on how to avoid the risks to themselves and their pets (Figure 2). This has been achieved without creating irrational panic. Thanks also to the multidisciplinary efforts, progress is being made towards treatment: a novel agent (favipiravir) has shown efficacy in mice,⁶ and early promise in humans.⁷ What we have learned about SFTS in people, cats, dogs, raccoons, and cheetahs will ultimately benefit people, cats, dogs, raccoons, and cheetahs.

Broader implications of a One Health approach

Among the many morals of this story, I want to highlight one key message for us. One Health means that veterinary medical writing – and any other part of medical communication for that matter – belongs in the mainstream. We should be open to the idea that crucial scientific evidence can come from anywhere.

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Medical Writing Humour

A poem for my client

The text you wanted in the last draft,
Has now been taken out.
I'm sure you'll want it in again,
Of that I have no doubt.
New tables you requested,
Are detailed in e-mail,
To the stats guy I've been telling,
For 3 months, to no avail.
The post-text tables for lab shifts,
Are sufficient in my eyes,
But I'll add a convoluted sentence,

So it comes as no surprise.
Oh now you want the sentence out,
Oh gosh what must you think!
I'll replace the sentence you put in.
With my original cross link!
I love that Regulatory,
Has removed my pronouns now,
I put them in for the CRM,
And see how that goes down.

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