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Lack of seasonality of canine tetanus in California

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Lack of seasonality of canine tetanus in California

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SCHOLARONE™
Manuscripts

Dear Editor:

Recently the Journal published our brief clinical communication reporting a seasonality to the prevalence of canine tetanus in the United Kingdom.¹ According to this analysis of 49 dogs with tetanus, it appears that canine tetanus is more common during the cooler, wetter winter months in the United Kingdom compared to other times of the year. When we conducted this retrospective study, we also investigated the seasonal prevalence of canine tetanus cases presented to the Veterinary Medical Teaching Hospital at the University of California, Davis, over the same period (2006 – 2017). A Spearman's correlation test was used to assess for a correlation between the monthly prevalence of canine tetanus at UC Davis and monthly hospital caseload. A Kruskal-Wallis test was performed to assess for a difference between monthly and seasonal tetanus caseload.

The electronic medical records database search revealed 24 cases of canine tetanus presented to UC Davis between January 2006 and June 2017; all dogs lived in central and northern California at time of diagnosis. Unlike in the United Kingdom, there was no evidence of seasonality to canine tetanus in this population of dogs from California (Figure 1).

The lack of seasonality of canine tetanus in California may reflect a Type II error due to small sample size, or it may reflect the relative climate variability of the region from which the dogs were referred. California has 24 different climatic zones according to the Sunset climate zone maps. The Sunset climate zones are considered more precise than climate zones determined by the United States Department of Agriculture because they take into consideration both summer high and winter low temperatures, humidity, and rainfall patterns.² The 24 dogs with tetanus seen at UC Davis Veterinary Medical Teaching Hospital between January 2006 and June 2017 were from a minimum of 6 of these zones,³⁻⁵ which represent the foothills of the Sierra Nevada mountain range, the cold air basins and thermal belts of the Central Valley, and the eastern and southern San Francisco Bay Areas. The authors suggest that canine tetanus may only be seasonal when cases present from a relatively uniform climate like that in the United Kingdom. Further study would be required to confirm this hypothesis.

Sincerely,

Jamie M. Burkitt-Creedon, DVM, DACVECC

University of California, Davis

Daria Starybrat, DVM, MVetMed, DACVECC

Royal (Dick) School of Veterinary Studies, University of Edinburgh, Midlothian, UK

Karen Humm, MA, VetMB, DACVECC

Royal Veterinary College, Hatfield, UK

Figure Legend:

Figure 1. Seasonal prevalence of canine tetanus in a population of 49 dogs from the UK and 24 dogs from central and northern California.

References

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Peer Review

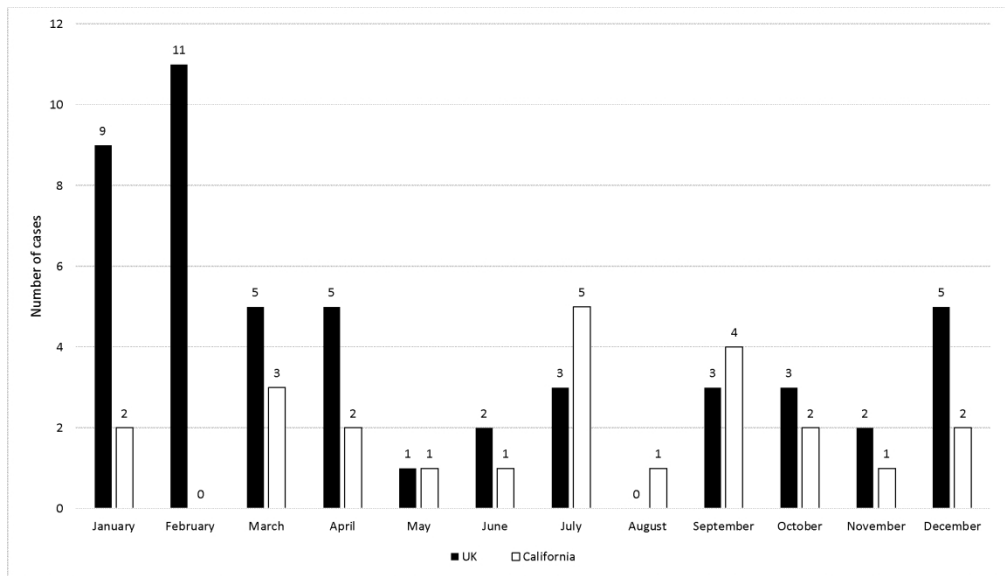


Figure 1. Seasonal prevalence of canine tetanus in a population of 49 dogs from the UK and 24 dogs from central and northern California.

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