Frequency of phantom scratching in Cavalier King Charles Spaniels (CKCS) assessed by owner questionnaire before and during maropitant treatment

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Funding was provided by Cavalier Matters Charity. Please send any questions to emma.gilbert@cvsvets.com

Acknowledgement Passionate productions

Study basis

- The superficial dorsal horn was previously found to be affected in CKCS with syringomyelia with the clinical sign of phantom scratching (1).
- The NK-1 receptors located in this area are considered as a target for treatment for fictive itch (2).
- We aimed to assess outcomes with 2 weeks maropitant treatment (NK-1 R antagonist) on frequency of phantom scratching.
- RVC Ethical approval URN: 2018 1835-3
- There were no conflicts of interest.

Transverse T2W MRI of the cervical spinal cord showing a syrinx affecting the superficial dorsal horn (arrow).

Study design:

Definition Persistent unexplained compulsive scratching of his/her sides, neck, ears or face with no underlying skin disease, usually not touching the skin (scratching at air/phantom scratching/guitar playing)																
a. Spontaneous Scratching																
Never	<1/month	<1/week	1/week	2-3/week	4-6/week	1-2/day	3-5/day	6-8/day	9-11/day	12-14/day	15-16/day	1/h	2/h	4/h	>4/h	Don't know
b. Scratching when excited or agitated																
Never	<1/month	<1/week	1/week	2-3/week	4-6/week	1-2/day	3-5/day	6-8/day	9-11/day	12-14/day	15-16/day	1/h	2/h	4/h	>4/h	Don't know
c. Scratching or attempting to scratch while walking ("bunny hopping")																
Never	<1/month	<1/week	1/week	2-3/week	4-6/week	1-2/day	3-5/day	6-8/day	9-11/day	12-14/day	15-16/day	1/h	2/h	4/h	>4/h	Don't know
d. Scratching when wearing collar/harness																
Never	<1/month	<1/week	1/week	2-3/week	4-6/week	1-2/day	3-5/day	6-8/day	9-11/day	12-14/day	15-16/day	1/h	2/h	4/h	>4/h	Don't know
e. Scratching when stroking grooming or petting																
Never	<1/week	weekly								daily						Don't know
		< 1/2 the times	1/2 the times	> 1/2 the times	Every time	< 1/2 the times				1/2 the times	> 1/2 the times		Every time			
f. Scratching when touched in specific areas of the body																
Never	<1/week	weekly								daily						Don't know
		< 1/2 the times	1/2 the times	> 1/2 the times	Every time	< 1/2 the times				1/2 the times	> 1/2 the times		Every time			

RVC NeP Questionnaire, completed at the Day 0 and Day 14 of trial.

Results:

- Population: 9 CKCS, mean age 6.1 years (range 3-10), 3 males (1 entire, 2 neutered) and 6 females (1 entire, 5 neutered).
- The most common site that the syrinx involved the superficial dorsal horn was the level of C3 or C4 vertebrae.
- Following treatment with maropitant mean scores for questions on frequency of phantom scratching decreased (Table below).
- Wilcoxon Rank sign analysis was significant in 4/6 of these questions. Spontaneous scratching (p=0.017), scratching while walking (p=0.011), scratching when groomed (p=0.017), scratching when touched (p=0.026).

Scratch trigger	Spontaneous	Excitement or agitation	Walking	Wearing Collar or harness	Stroking or grooming	Touch of specific body area
Number of cases with decreased/increased frequency	7/1	5/1	8/0	4/1	7/0	6/0
Mean change in frequency score	-3.33	-1.22	-4	-3	-1.88	-1.55

Discussion:

- VAS scores were difficult for owners to complete without guidance with only 3/9 being completed (though notably all giving a decreased score consistent with improvement), we therefore excluded them from the results of our study.
- This trial was open label, and therefore subject to caregiver bias, placebo effect and high owner expectation (3,4).
- Owners were happy with maropitant as a treatment for chronic disease due to its low side effect profile.
- Further investigation with a placebo controlled crossover study is needed next to confirm this initial evidence for a positive effect to decrease frequency of phantom scratching in dogs and the lack adverse effects found with treatment with this licensed veterinary product.

References:

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