Photographic, Cytological and MRI evaluation of the hard, soft palate and tonsils in Cavalier King Charles spaniels with Chiari-like malformation

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OBJECTIVES

Determine if Cavalier King Charles spaniels (CKCS) with Chiari-like malformation associated pain (CM-P) or syringomyelia (SM) are predisposed to oropharynx inflammation.

METHODS

Case control study 1) analysis of gross inflammation from oropharynx photographs; 2) cytological preparations from hard palate, soft palate and tonsils assessed for

nucleated cellularity, mucus and bacterial presence. Ratio of inflammatory to epithelial cells calculated in 5 fields of view (40x objective); 3) soft palate quantitative measurements from T2-weighted midsagittal MRI 4) visual assessment of presence of soft palate hyperintensity, soft palate, nasopharynx impingement or otitis media with effusion (OME) from T2-weighted midsagittal and transverse head MRI.

Anonymized sample comprised of 26 CKCS presented for diagnostic investigation (ethical approval NASPA-2018-006); 13 with CM-P / SM and 13 unaffected controls.

Data analysis included descriptive statistics, Mann-Whitney U, Independent-Samples T Test and Chi-squared analyses

RESULTS

Analysis of photographs suggested oropharyngeal inflammation was common particularly tonsillar eversion with reddening but was not more likely in CM-P/SM affected CKCS. Cytological analysis suggested a trend for greater inflammation in the affected group; however, the difference was not significant. Soft palate thickness and length was similar between groups. 19 of 24 CKCS had soft palate hyperintensity suggesting inflammation; 14 of 24 had nasopharyngeal impingement and 9 of 24 had OME

STATEMENT (CONCLUSIONS)

Oropharyngeal inflammation is a common co-morbidity and possible cause of pain in CKCS. However, this small study suggests that although this problem may be predisposed by brachycephalic conformation, it is not more likely with brachycephalic conformation associated with CM-P and SM.