

Cardiac Cachexia in Cats with Congestive Heart Failure

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In the Literature

Santiago SL, Freeman LM, Rush JE. Cardiac cachexia in cats with congestive heart failure: prevalence and clinical, laboratory, and survival findings. *J Vet Intern Med.* 2020;34(1):35-44.

FROM THE PAGE ...

Congestive heart failure (CHF) can trigger detrimental systemic effects due to upregulation of neurohormonal and inflammatory systems¹; cardiac cachexia is one such example of a systemic effect. Several definitions of cardiac cachexia have been proposed in human medicine, with most including weight loss as a primary criteria; however, muscle loss may be a more sensitive marker of cachexia,² particularly in CHF patients with fluid accumulation that can significantly influence body weight. Approximately 50% of dogs and cats with CHF demonstrate some degree of muscle loss and cachexia.^{3,4} Although cardiac cachexia is a well-documented negative prognostic indicator in humans,¹ it has not been well studied in cats with CHF.

The primary goal of this study was to determine the prevalence of cachexia in cats with CHF based on definitions in human and veterinary literature. Differences in clinical findings, laboratory values, and outcomes in cats with and without cardiac cachexia were evaluated.

Clinical records of 125 cats with CHF secondary to acquired heart disease were retrospectively reviewed. The authors identified 7 definitions of cardiac cachexia that appeared applicable to small animals; only 1 definition exclusively used muscle condition score (MCS) to identify patients with cardiac cachexia. MCS was assessed as normal, mild, moderate, or severe muscle loss as defined by WSAVA guidelines.⁵

Prevalence of cardiac cachexia in this group ranged from 0% to 66.7%, depending on the definition applied. Muscle loss was noted in cats of all BCSs, including 11 of 61 cats that were considered overweight (ie, BCS >5/9). When the definition of cardiac cachexia that exclusively used MCS was applied to the entire study group, 41.6% of cats met the criteria for muscle loss and thus were considered to have

cachexia. Cats with muscle loss were more likely to have pleural effusion and had significantly higher BUN and BUN:creatinine ratios, lower body weights and BCSs, higher neutrophil concentrations, and lower hemato-crit and hemoglobin concentrations. Cats with muscle loss also had significantly shorter survival times (ie, ≈95 days) as compared with cats without muscle loss (ie, ≈281 days). Thin body condition (ie, BCS <4/9) was also associated with decreased survival as compared with overweight cats (ie, ≈35 days vs ≈216 days).

Overall, cardiac cachexia prevalence in cats with CHF varies widely, depending on its definition. MCS appears to be a good clinical marker to identify cats with cachexia. Of note, cachexia can be present prior to overt weight loss; many cats considered to have a normal or overweight BCS had muscle loss based on MCS. Based on the finding of decreased survival with muscle loss, detection of cachexia based on MCS appears to be a useful prognostic indicator for cats with CHF.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** Cachexia can be present in cats with a normal or overweight BCS.
- 2** Assessment of MCS in cats with advanced heart disease should be performed at each visit to detect early signs of cachexia.
- 3** Muscle loss and low body weight can occur secondary to advanced heart disease and have been shown to decrease survival times in cats with CHF.

References

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