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Iron status in dogs with mitral valve disease.

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Abstract

In people, serum iron (SI) deficiency (SID) is a frequent co-morbidity in chronic heart failure (CHF), reducing quality of life and survival (Belmar Vega L, 2016).
Mitral valve disease (MVD), the most common canine acquired heart disease, lead to CHF. (Borgarelli, 2012).
Aims of the study were determine prevalence and characteristics of SID (SI < 90 µg/dL) in MVD dogs, analyze differences in SI among ACVIM classes, symptomatic and non-symptomatic patients, and study effects on survival.
Fifty-four privately owned MVD dogs (DIMEVET, January 2015 - April 2016) with complete physical evaluation, chest x-ray, echocardiography and serum biochemical panel were included.
Iron status was evaluated measuring SI, total iron-binding capacity (TIBC) and percentage transferrin saturation (%SAT).
Median age of dogs was 11 years (IQR 10 - 14), median body weight 11 kg (IQR 6 – 22).
Most were intact males (42%) mongrels (46%). Non-symptomatic and symptomatic dogs were 64% (n=36) and 33% (n=18).
The prevalence of SID was 18.5 % (10/54: 6 symptomatic and 4 non-symptomatic). Only 3 patients (6%) presented anemia (Hct ≤ 37%).
TIBC (NV: 270-496 µg/dL) was within or above the reference range in 6/10 dogs with SID, while %SAT (NV: > 23%) was below the minimum level in 4/10 dogs.
No differences in SI were found between ACVIM classes, symptomatic and non-symptomatic patients.
Log-rank analysis showed significant shorter survival in MVD dogs with SID (p: 0.030), nevertheless multivariate Cox analysis revealed that only the presence of CHF symptoms affect survival (p: 0.001).
TIBC and %SAT suggest that SID is most frequently true (primary) than functional (secondary).

References

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