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การจัดการปัญหาโรคอ้วนในสุนัขโดยการใช้หัวบุก

Management of obesity in Dog using Amorphophallus

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บทคัดย่อ

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คำสำคัญ :

ABSTRACT

Background

The relationship between overall obesity and fat distribution in dogs and the development of heart disease is unclear. In the present study we evaluated the association between overall obesity and fat distribution and clinical heart disease by morphometric and computed tomography (CT)-based measurements. Body condition score (BCS), modified body mass index (MBMI, kg/m2), waist-to-hock-to-stifle distance ratio (WHSDR), waist-to-ilium wing distance ratio (WIWDR), and waist-to-truncal length ratio (WTLR) were compared between dogs with (n?=?44) and without (n?=?43) heart disease using receiver operating characteristic (ROC) analysis. Intra-abdominal fat (IAF) and subcutaneous fat (SQF) were measured in dogs with (n?=?8) and without (n?=?9) heart disease at the center of the fourth and fifth lumbar vertebrae by CT.

Results

BCS was similar between heart disease and healthy groups (3.6???0.2 vs. 3.3???0.1, P?=?0.126). The following morphometric measurements were greater in the heart disease group compared with healthy canines: MBMI (65.0???4.5 vs. 52.5???3.7 kg/m2, respectively, P?=?0.035); WIWDR (4.1???0.1 vs. 3.1???0.1, P?<?0.01); and WTLR (1.25???0.04 vs. 1.05???0.04, P?<?0.01). However, there was no significant difference in WHSDR (3.6???0.1 vs. 3.7???0.2, P?=?0.875). Interestingly, IAF was significantly increased

in dogs with heart disease compared with healthy dogs (23.5???1.5% vs. 19.4???1.2%, P?=?0.039) whereas SQF was similar between two groups (35.5???2.7% vs. 38.6???3.5%, P?=?0.496). Of the five morphometric indices studied, WIWDR and WTLR provided acceptable discrimination for diagnosing heart disease in dogs, with areas under the ROC curve of 0.778 (95% confidence interval [CI]:0.683-0.874) and 0.727 (95% CI:0.619-0.835), respectively.

Conclusions

Our data indicate that abdominal obesity, rather than overall obesity, is associated with heart disease in dogs. Measurements of both WIWDR and WTLR are particular useful for detection of an abdominal obesity in dogs.

Key words : - , - , Dogs , Abdominal obesity , Heart disease , Reciever operating characteristic , Waist circumference , Computed tomography

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