

VetCompass Clinical Grading Tool for Heat-related Illness in Dogs – a novel tool to support clinical decision-making in primary-care practice.

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Objectives

Historically, classification of heat-related illness in dogs relied on body temperature and neurological evaluation, extrapolated from traditional human classifications. Novel systems in human medicine now embrace the multi-systemic progressive nature of heat-related illness. This study aimed to adapt these novel human systems for use in dogs and explore the resultant predictive value for primary-care triage.

Methods

Dogs with heat-related illness were identified from VetCompass UK primary-care clinical records. Clinical presentation and outcome data were extracted, events were then retrospectively graded as mild, moderate or severe using a novel clinical grading tool which utilised only clinical signs. The ability of the grading tool to predict fatality was explored using logistic regression.

Results

The study included 856 heat-related events (2016-2018). The most frequent clinical signs were altered respiration (63.7%) and lethargy (44.3%). Clinical signs associated with increased risk of death were: abnormal mentation including coma (x13.3), stupor (x9.6), multiple seizures (x6.4), gastrointestinal haemorrhage (x5.2), petechiae/purpura (x4.2) and ataxia (x3.3).

The survival rate for cases graded by the tool as mild (altered respiration, lethargy, episodic collapse), moderate (gastrointestinal signs, a single seizure) and severe (abnormal mentation, gastrointestinal haemorrhage, petechiae/purpura) were 97.8%, 94.5% and 43.2% respectively.

Severe events had 58.1 (95%CI 25.1-134.4) times the odds of death compared to mild events.

Statement (conclusions)

The marked survival difference between grades highlights the prognostic value of the novel clinical grading tool in practice. The VetCompass grading tool used in combination with patient signalment and history could improve clinical decision making for dogs with heat-related illness.