Cooling methods used in dogs with heat-related illness under UK primary veterinary care during 2016-2018.

Presented as a Clinical Abstract at BSAVA Congress 2021, online on Monday 24th May 2021:
https://www.bsavaevents.com/bsavacongress2021/en/page/clinical-abstracts

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Objectives

Greater duration and extent of hyperthermia in heat-related illness cases is associated with poorer prognosis. Rapid, effective cooling is critical for improved outcomes. Water immersion and water spray with air movement are currently considered the most effective cooling methods. This study explored cooling methods used in dogs with heat-related illness presenting for first-opinion veterinary care, and compared utilised cooling practices to best practice.

Methods

Dogs with heat-related illness events were identified from VetCompass clinical records. Clinical severity and information on cooling methods pre/post presentation were extracted. Associations between event severity and cooling methods used were assessed using a chi-squared test.

Results

The analysis included 810 heat-related illness events. No active cooling was recorded in 47.9% (388/810 events). Among 422 (52.1%) actively cooled dogs, cooling methods were: wet towels (35.3%), water spray/water immersion (33.2%), air movement (22.5%), ice/ice packs (11.8%), cold intravenous-fluids (5.9%), alcohol on footpads (5.2%), cold-water enema (1.9%) and unspecified (28.7%). Multiple cooling methods were used in 34.1% of events, with wet towels plus air movement (8.5%) the most common combination reported.

Compared to mild and moderate cases, severe cases were three times more likely to receive cold intravenous-fluids (p=0.003), and six times more likely to receive cold-water enemas (p=0.007).

Statement (conclusions)

These findings benchmark active cooling actions used to manage heat-related illness in dogs in the UK; the use of active cooling was not documented in almost half of cases. These results suggest the value of improved public and veterinary education to increase use of effective, evidence-based cooling.