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Pilot study evaluating surface temperature in dogs with or without fear-based aggression

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Abstract

The use of a standardized physiological measure in veterinary behavior evaluations would improve both accuracy of the diagnosis and monitoring of the treatment response. Infrared thermography (IRT) is a non-invasive, remote assessment tool used primarily in research to evaluate changes in surface body temperature resulting from underlying physiological processes. IRT has not been examined widely in a veterinary behavior clinic setting, and its clinical validity requires testing. In this pilot study, patient data were reviewed retrospectively from a veterinary teaching hospital's behavior clinic population to determine if surface eye temperature as measured by IRT differed in dogs with fear-based aggression compared to dogs with various other behavioral diagnoses. Forty-six dogs were subdivided into groups with fear-based aggression towards unfamiliar people (n = 32) or no fear-based aggression but with other behavioral diagnoses (n = 14) to compare surface eye temperature and behavioral responses in the clinic setting. The potentially provocative stimulus was the presence of unfamiliar people in the consultation room (clinician and student). The primary outcomes of interest were change in surface eye temperature and behavioral responses between two time points 45-minutes apart during the 60-minute consultation. It was hypothesized that in contrast to dogs with fear-based