RESUMO SIMPLES - OUTRAS ÁREAS TEMÁTICAS

EFFECT OF A LAVENDER (LAVANDULA ANGUSTIFOLIA) ESSENTIAL OIL-BASED FORMULATION ON DOGS' WELFARE DURING VETERINARY CLINICAL EXAMINATION

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Animal welfare is crucial in veterinary practice, especially during the clinical examination, where stress alters behavior and some physiological parameters such as heart and respiratory rates, and even hematological parameters. This affects both the animal's experience, leading them to negatively associate the veterinary visit with fear and anxiety, and the effectiveness of the diagnosis due to reduced reliability in the evaluated parameters. This study aimed to investigate the efficacy of a formulation based on essential oil of Lavandula

angustifolia in reducing stress in dogs during veterinary procedures. Twelve Beagle dogs, consisting of six males and six females of the same age range, between fourteen and eighteen months, were selected and treated with a topical application of 0.5 mL of a lavender essential oil formulation at 15% or 30% in each ear canal, administered 20 minutes before the clinical examination. Formulations containing essential oil of Lavandula angustifolia at concentrations of 15% (F15) and 30% (F30) were developed, along with a placebo formulation (FP) without the oil. The selection of pharmaceutical excipients (antioxidants, buffers, surfactants, etc.) was based on pre-formulation studies to achieve suitable physicochemical characteristics. Ingredients included ethanol, polyvinylpyrrolidone (PVP), citric acid, polysorbate 80, butylated hydroxytoluene (BHT), dimethyl sulfoxide (DMSO), and propylene glycol (PPG). Physicochemical properties, including organoleptic characteristics and pH, were evaluated, and stability tests were conducted. The dogs underwent two distinct experimental days, where one day they received the placebo formulation and on the other day the formulation with essential oil, with a 15-day interval between each session. The evaluation was conducted during the clinical examination with the assistance of a veterinarian, which included inspecting the health of the animals, performing procedures such as blood collection and measuring vital parameters like heart and respiratory rates. Additionally, an observer, a veterinarian experienced in canine behavior, recorded the animals' behaviors, analyzing body postures, ear positions, eye positions, mouth expressions, and other indicators of stress in dogs as reported in the literature. The formulations demonstrated adequate physicochemical characteristics and stability, making them viable for topical application in pets. Their topical application did not result in adverse events in the animals and led to a significant reduction in stress-related behaviors, fear, and anxiety in the group treated with the 30% formulation. Although not statistically significant, the 30% formulation also reduced heart and respiratory rates. The results suggest that the administration of lavender essential oil is an effective strategy to promote canine welfare in veterinary clinics, causing dogs to exhibit fewer stress, anxiety, and fear behaviors during the veterinarian's handling while performing the clinical examination. The reduction of stress not only improves the animals' experience and mental well-being but also increases the accuracy of diagnoses and the effectiveness of treatments. Furthermore, the implementation of strategies aimed at animal welfare highlights the need to create less stressful environments in veterinary clinics. This underscores the veterinarians' responsibility to ensure more humane and effective care. It is essential for

professionals in the field to consider the emotional and physical impact of stress on animals during consultations and procedures.

Palavras-chave: canine behavior; veterinary consultation; lavender; stress in dogs.