

Analysis of Effective Methods of Identifying and subsequently Treating Separation Anxiety in Domestic Dogs through Training and Pharmacological Intervention

By Ellen Sutherland

Word count: 996

Introduction

Distress is defined as pain or suffering affecting the body, a bodily part, or the mind (Merriam-Webster, 2011). Separation anxiety in dogs is a distress response to separation from the figure to which the dog is most attached (Palestrini *et al.*, 2010). This paper will focus on separation anxiety in the absence of the owner. The complex aetiology of separation anxiety means that the underlying cause of the behaviour may be elusive. Thus, a range of authors has supported symptom-based treatment as an effective means of treating separation anxiety (Palestrini *et al.*, 2010). This paper will investigate advances in the welfare of domestic dogs showing separation anxiety, including methods to accurately observe separation-related behaviours, as well as effective treatments to alleviate anxiety and modify behaviour, such as dog-appeasing pheromone (DAP) and systematic desensitisation.

Discussion

Undesirable separation-related behaviours, including vocalisation, inappropriate elimination, destructiveness, self-mutilation, and repetitive motor activity (Palestrini *et al.*, 2010), are often the cause of breakdown of the human/animal bond, sometimes resulting in surrender or euthanasia (Palestrini *et al.*, 2010). Both elimination and self-mutilation are thought to convey an anxious state, while vocalisation and destructiveness are interpreted as attempts to reunite with the owner (Bradshaw *et al.*, 2002). Hormonal and immunological responses are also influenced by anxiety, compromising recovery in hospitalised dogs (Kim *et al.*, 2010).

As separation anxiety is identified only when there is evidence of the related behaviours that occurred in the owner's absence, it may be difficult to detect such behaviours and milder cases may go unnoticed (Palestrini *et al.*, 2010). To fully understand these behaviours and monitor improvement associated with a particular treatment, a more reliable investigation is required. In order to obtain additional, objective information, Palestrini *et al.* (2010) conducted a study in which a video camera was used to observe 23 dogs left at home alone, all of which had visited two different behaviour clinics for separation-related behaviours. Although the small sample of subjects limits the direct application to the population of domestic dogs, monitoring with a video camera can greatly assist in decisions about treatments for separation anxiety, even if only for individual cases.

The efficacy of DAP in treating separation-related behaviours in hospitalised dogs was recently investigated in a placebo-controlled and double-blind study conducted by Kim *et al.* (2010). The 24 dogs receiving DAP treatment were separated from the 10 control dogs so as to avoid cross-contamination. Being hospitalised for different reasons and being on different medications, the level and type of physical pain is likely to have varied among the dogs and these compounding factors may have influenced behaviour. However, the behavioural signs used in this study were selected to reflect separation-related behaviours and results showed an overall decrease in these behaviours in the group treated with DAP, particularly in pacing, excessive licking and inappropriate elimination (Kim *et al.*, 2010). A triple-blind, placebo-controlled study conducted by Gaultier *et al.* (2008) investigated the efficacy of DAP collars in reducing anxiety in puppies recently introduced to a new home. Vocalising behaviour when puppies wearing DAP collars were left alone decreased throughout the 15-day trial. However, the majority of control puppies continued to vocalise when left alone for the duration of the trial (Gaultier *et al.*, 2008). The results from the two studies show that, overall, the use of DAP is effective in managing separation-related behaviour. Unlike other pharmacological agents, such as clomipramine, there are no side effects or toxicity associated with DAP (Kim *et al.*, 2010). DAP can be sprayed, spread from diffusers or infused into the dog's collar. It is

especially useful when there is not sufficient time to train dogs prior to the separation (e.g., going to hospital or to a boarding kennel). Although DAP treatment does not directly address the separation-related behaviour and must be constantly provided (Butler *et al.*, 2010), like other pharmacological interventions, it creates a more comfortable environment in which the dog is less likely to display the distressing behaviours. Thus, it is particularly useful in veterinary clinics.

Systematic desensitisation is a process by which the dog becomes habituated to the absence of the owner, resulting in the reduction or elimination of separation-related behaviours. In a study conducted by Butler *et al.* (2010), eight owners isolated their dogs three or four times each day, with a minimum of one hour between these separation periods. The initial isolation periods were short and unthreatening. The length of each period was then progressively increased until threatening periods of isolation became unthreatening as the dogs became accustomed to isolation. Systematic desensitisation was combined with counter-conditioning. Food was given to diminish anxiety and create a positive emotional association with the owner's departure at the beginning of the separation period, as well as rewarding the absence of separation-related behaviour at the end of the separation period. If the dog engaged in separation-related behaviour, the food was withheld at the end of the separation period as a form of negative punishment. Positive punishment is thought to contribute to the general anxiety of the dog and may exacerbate the separation anxiety rather than assisting in treatment (Butler *et al.*, 2010). At the end of the treatment phase, the frequency and severity of the separation-related behaviour of all eight of the participating dogs was reduced. As not all owners applied counter-conditioning correctly, the success in this study can be attributed primarily to systematic desensitisation (Butler *et al.*, 2010).

Conclusion

Accurate observation of separation-related behaviours allows a superior understanding of the development and manifestation of separation anxiety. This enables the development and employment of more effective treatments for separation anxiety. While systematic desensitisation and DAP treatment both result in a decrease of separation-related behaviours, they work in very different ways. Systematic desensitisation involves habituation to a threatening situation and, in the case of separation anxiety, enables the dog to cope in the absence of the owner. DAP creates a less stressful environment for the dog, rather than training the dog to cope with the underlying cause of the anxiety.

References

- Bradshaw, J.W.S., McPherson, J.A., Casey, R.A., Larter, I.S. (2002) Aetiology of separation-related behaviour in domestic dogs. *Veterinary Record* 151, 43-46.
- Butler, R., Sargisson, R.J., Elliffe, D. (2010) The efficacy of systematic desensitization for treating the separation-related problem behaviour of domestic dogs. *Applied Animal Behaviour Science* 129, 136-145.
- Encyclopedia Britannica, 2011, Merriam-Webster, viewed 30th June 2011, online, available at: <http://www.merriam-webster.com/dictionary/distress>
- Gaultier, E., Bonnafous, L., Vienet-Legue, D., Falewee, C., Bougart, L., Lafont-Lecuelle, C., Pageat, P. (2008) Efficacy of dog-appeasing pheromone in reducing stress associated with social isolation in newly adopted puppies. *Veterinary Record* 163, 73-80.
- Kim, Y., Lee, J., Abd el-aty, A.M., Hwang, S., Lee, J., Lee, S. (2010) Efficacy of dog-appeasing pheromone (DAP) for ameliorating separation-related behavioral signs in hospitalized dogs. *Canadian Veterinary Journal* 51, 380-384.
- Palestrini, C., Minero, M., Cannas, S., Rossi, E., Frank, D. (2010) Video analysis of dogs with separation-related behaviours. *Applied Animal Behaviour Science* 124, 61-67.