

Assessing the efficacy of prescribing tricyclic antidepressants in conjunction with modifying behaviour therapy for the treatment of separation anxiety in dogs

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Introduction

When animals from social species, such as canids, become separated from their group it is not uncommon for them to experience separation anxiety and engage in separation-related behaviours designed to reunite group members (Howitz, 2000). As a consequence of their social nature, dogs often consider owners, and their family, to be part of their social group with whom they subsequently form strong emotional attachments and experience separation distress when estranged from these people (Simpson, 2000). The most commonly recognised behaviours and autonomic signs associated with separation anxiety include excessive vocalisation, inappropriate elimination and destruction in the household and in more severe cases may be manifest as vomiting, hypersalivation, diarrhoea and self-injury (Takeuchi et al. 2000) as well as ritualised pacing and circling or depression (Simpson, 2000). Voith and Borchelt (1996) stated that behavioural problems associated with separation anxiety may account for up to 21% of canine patients seen in companion animal behaviour practices, with the prevalence increasing towards 50% in geriatric animals. Successful treatment is necessary to relieve the distress experienced by the animal and because the destruction, elimination and vocalisation may become intolerable to the owner resulting in abandonment, surrender to animal shelters or potentially euthanasia of the animal (King et al., 2000b, Simpson, 2000).

Discussion

The following is a review of recent studies conducted to evaluate the efficacy of treating dogs exhibiting clinical signs of separation anxiety with behaviour modification therapy in conjunction with the administration of psychotropic antidepressants (King et al., 2000b, Seksel and Lindeman, 2001 and Takeuchi et al, 2000). Clomipramine hydrochloride is a tricyclic antidepressant that inhibits the neuronal uptake of serotonin and to a lesser extent noradrenaline (King et al., 2000a). Clomicalm, a commercially available form of clomipramine hydrochloride produced by Novartis Animal Health, was tested by King et al., (2000b) and Seksel and Lindeman, (2001) whilst Takeuchi et al, (2000) observed the efficacy of amitriptyline

King et al., (2000b) conducted a trial involving 96 dogs, each of which had a reported history of behavioural problems that were confirmed as being associated with separation anxiety according to predetermined criteria. Treatments, received for 2-3 months, comprised a standard dose of clomipramine (1 to <2mg/kg, BID), a low dose of clomipramine (0.5 to <1 mg/kg, BID) and a placebo, which were administered in conjunction with behavioural therapy. Changes in the dogs' behaviour were evaluated at days 28, 56 and 84 and compared to behaviour at day 0.

The results indicated that the improvement for signs of separation anxiety, (i.e. defaecation, destruction and urination), in dogs from the standard dose group achieved by day 28 were higher than the values obtained at any of the three days in the placebo group. It was therefore suggested that the response rate to this dose of clomipramine was three times faster than that obtained in the placebo group. Individually, significant improvements for signs of destruction were detected at days 28 and 56, for defaecation at days 56 and 84 and for urination at day 56. Overall no significant improvement was observed between the standard dose group and placebo group for vocalisation. However, results recorded at days 28 and 56 for the standard dose group (i.e. 58% and 84%) when compared to those for the placebo group at day 84 (i.e. 64%) indicated that at this dose rate clomipramine increases response rate by 1.5 to 3 times.

The study concluded that clomipramine, administered at a dose rate of 1 to <2 mg/kg BID produced a significant improvement in the signs of separation anxiety as compared to the placebo when given in conjunction with a programme of behaviour therapy. The authors also commented on the fact that given time the dogs on the placebo receiving behavioural therapy only, may have caught up to those receiving the standard dose of clomipramine group given adequate time. Whilst recognising that continuation of the study may have provided an answer to this suggestion, it is important to recognise that such rapid responses associated with using the drug are likely to appeal to certain clients, potentially encouraging the owner to persist with treatment and thus reduce the likelihood of the animal being abandoned. This regrettable intolerance was evidenced in the trial by Seksel and Lindeman, (2001), in which two animals were euthanased, despite moderate improvement.

The study by Seksel and Lindeman, (2001) involved the treatment of 25 dogs each presenting with a history of obsessive-compulsive disorder, separation anxiety, noise phobia, inappropriate fear responses or a combination of these. In association with behavioural therapy, clomipramine was administered at a starting dose of 1 to 2mg/kg and increased incrementally to a maximum of 4mg/kg if required. Medication continued for at least 4 weeks after clinical signs had disappeared or were substantially reduced and withdrawal of medication was then attempted incrementally whilst behaviour therapy continued. If removal resulted in a relapse of behaviour then medication was continued.

Results from this study indicated that separation anxiety, obsessive-compulsive disorder and noise phobia in dogs can be managed with a combination of clomipramine and behavioural therapy, though a period of at least three months should be designated to provide an opportunity for the treatment to be suitably assessed. Of the 24 dogs in the study clinical signs were largely improved or disappeared in 16 dogs, five demonstrated slight to moderate improvement and the behaviour remained unchanged in three dogs. The results from this trial may have been more pertinent had it been possible to have a treatment group receiving a placebo. However, due to the severity of the signs and previous treatment failures the owners involved were unwilling to forego medication as part of therapy, again highlighting the desperate desire for rapid improvement sought by some owners. Seksel and Lindeman, (2001) did note also that multiple problems, long-standing disorders and no behaviour modification were likely to have contributed to the lack of adequate improvement in a certain number of cases.

Takeuchi et al.(2000) achieved similar results in a trial designed, in part, to evaluate amitriptyline treatment of separation anxiety and also to investigate the owner compliance of discharge instruction, an important factor that was difficult to evaluate in all of the trials. In a study involving 52 dogs, 23 were treated with prescribed doses of amitriptyline, sometimes in combination with a benzodiazepine or busiprone for more than one month. Of these animals, 12 were reported to have improved at the time of the follow up call made approximately six months after the behaviour consultation. Interestingly, 17 of the 25 dogs treated with behaviour therapy alone had improved, suggesting that behavioural therapy, conducted by a motivated owner, can result in desired outcomes, and may be the use of tricyclic antidepressants should only be utilised as an adjunct to such treatment if results are not forthcoming. Encouragingly, Takeuchi et al., (2000) found that some owners were actually reluctant to use drugs for treatment of their dogs.

This trial was important as it discussed in more detail the rate of compliance with instructions of the owners and noted that significantly fewer dogs with owners that were given greater than five instructions were improved or cured compared with owners given fewer instructions.

Conclusions

From the results obtained from the three studies it can be concluded that tricyclic antidepressant drugs prescribed for the treatment of separation anxiety in dogs can result in significant and more rapid responses to modifying behavioural therapy. However the underlying fact remains that owner education and owner compliance with instructions are the most important factors in treating dogs exhibiting separation anxiety associated behaviour.

References

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