Separation Related Problems In Dogs

A Guide to their Assessment and Treatment

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Behavioural incompetence in dogs when alone has long been globally labelled as ‘separation anxiety’ or ‘separation related disorder’ although the problem is really one of failure to learn and apply effective coping strategies in response to social isolation. The emotional problem for the dog, as an innately social species, is essentially one of destroyed social bonding when his owners leave him at home alone. And of the psychological pain of isolation. This occurs both in the young and in susceptible older animals. (Walker 1999). Susceptibility, as with general fearfulness, may be heritable (Scott & Fuller 1965), but it is quite likely that many adult dogs present with the more accurately described Separation Related Problems (SRPs) as a direct consequence of never having been isolated while their emotional response would still be muted, i.e. at 3 to 5 weeks of age and when they would ordinarily start to learn appropriate coping strategies.
Emotional responses to isolation

Emotional responses to isolation in the dog range from indifference in the experienced, to varying degrees of disappointment, frustration, distress, anxiety, fear, depression or panic according to the temperament of the individual, experience of isolation and his/her opportunity to develop coping strategies that bring emotional relief. Some dogs may also even become angry and aggressive towards their owners as they attempt to leave the house in an attempt to maintain their company and prevent themselves from being isolated. As well as often leading to a mis-'diagnosis' of 'competitive' or 'status related' aggression, this behaviour can obviously add extra problems to the treatment of the underlying cause, an SRP (COAPE 2009).

Three case histories

The three case histories discussed in this book, Holstein, Bonny and Ben are accompanied by actual video footage of these dogs that you can view online at the following website address - http://www.coape.org/shop_srp_videos.html. (Note that this link is ‘hot’. That is, if you are reading this book on your computer, just click on it to open up the web page. If Adobe Acrobat displays a security warning, just click the ‘Allow’ button. These video clips are the significant highlights of many hours of video taken of each dog and are the subject of discussion for each of the cases presented here).

The neurotransmitter serotonin plays a major role in the debilitating emotional state of depression, and depression can occur as a result of long-standing anxiety states. Increasing the availability of serotonin in the brain is the primary mode of action of many anti-depressant drugs. In addition, serotonin, along with opioids and endorphins, forms part of a ‘reward cascade’ of neurochemicals that culminates in the release of another neurotransmitter, dopamine, which in turn produces feelings of comfort and pleasure.

The case history reviews identify the variation in emotional response to isolation of three adult dogs. They were collected and analysed by the author on behalf of the veterinary division of the pharmaceutical company, Novartis, during a programme of post-launch investigations into the effects of Clomicalm (clomipramine hydrochloride) – a tricyclic anti-depressant drug which increases the availability of the neurotransmitter serotonin by blocking its re-uptake (i.e. it is a Serotonin Re-uptake Inhibitor, or SRI).

Extensive research and comparison across species has shown that attachment and intense drives for social contact involve the opioid chemistry of the brain. Experimentally, morphine (a natural opioid) and its synthetic derivatives reliably alleviate separation or isolation distress, and SRIs may therefore similarly reduce the discomfort and block the panic in some cases (Walker 1999). Clomipramine hydrochloride also causes a reduction in circulating adrenaline through it’s adrenolytic properties, and so has an additional calming effect which is helpful in the treatment of distressed and aroused patients. Clomicalm was the first mediation to be granted a veterinary prescription licence for the treatment of a canine behaviour problem, that of the then labelled ‘separation anxiety’.

In order to ascertain the effects of the administration of Clomicalm to a number of dogs with SRP referred by veterinarians, a sound and/or movement activated video camera was installed in the owner’ homes to obtain footage of the dogs’ emotional states and behavioural responses when left alone.
Case 1: Holstein

Holstein is a nine-year-old male mongrel, living in an apartment in London.

**Presenting sign of SRP:** persistent barking, leading to complaints by neighbours and the resignation of his lady owner from her job in order to stay at home to comfort and keep her dog quiet. Problem duration: nearly 9 years!

The accompanying video footage shows that on the departure of his owners, Holstein waited by the exit door for about a minute and listened calmly and carefully to ensure they had left. He then turned suddenly and ran into the living room where he jumped onto a chair to look out of the window. When he couldn’t see his owners, he began a repetitive high-pitched bark for some minutes in an effort to attract their attention. When this failed, he became quiet while he went to his owners’ bedroom, jumped onto the bed and then barked in the same manner out of the window. After a couple of minutes, he again gave up and quietly jogged to the second bedroom to repeat the barking. When this failed to return his owners to him, he returned to the living room and repeated his barking in a cycle until they finally returned some half an hour later, to his delight.

The crucial feature of Holstein’s response was that while he was a little aroused when he realised that his owners had indeed left him at home on his own, his subsequent emotional state was quite calm. In order to resolve his sense of isolation, Holstein knew what to do – move quietly from room to room and then bark out of the window. He would maintain this cycle of behaviour all day according to his owners’ immediate neighbours. Eventually the barking would prove successful as his owners would always return to relieve his frustration at being isolated and so reinforce his barking behaviour as a successful strategy.

**Passing question:** can you see another quick ‘stress-relieving’ behaviour carried out by Holstein in the video during his passage from room to room when alone?

Hence the problem has persisted for nine years despite efforts by the owners to ‘ignore’ their dog more when they were at home with him and especially, prior to departure, to walk and feed him and then leave a radio playing for him as is recommended under many standard behaviour therapy approaches. None of these indiscriminate ‘traditional’ approaches to ‘separation anxiety’ produced any improvement, simply because Holstein wasn’t anxious when he was left alone and he had his own successful strategy which relieved his frustration.

Similarly, the prescription of Clomicalm (2mg/kg body weight twice daily) by Holstein’s veterinarian had only a mild calming effect, probably due to the anti-adrenergic effect of the medication. The medication has not assisted in helping Holstein abandon his barking behaviour in favour of a calmer strategy or to adopt an alternative innately rewarding behaviour, such as resting in his bed, playing with his many toys or chewing his chews.

Treatment would obviously be difficult with such a long-standing case where the SRP concerned an acute nuisance behaviour that was so ultimately rewarding for the dog. With Holstein maintained on the medication, he was accustomed to wearing a Husher, an elasticated muzzle. Although allowing a dog to drink, eat and chew toys etc, the Husher places an additional strain on the jaws when the mouth is opened wide repeatedly, particularly when barking. This quickly inhibited Holstein’s barking and denied him the success of this strategy. In its place, as can be seen in the later stage of the video clip, Holstein would stand calmly behind the exit door and simply whine occasionally. After a
couple of weeks of practice twice-daily short isolations, he began to lie on the floor by his owners’ favourite sofa, with an occasional visit to the door to listen for signs of their homecoming. He also came to view the fitting of the Husher some ten minutes prior to his owners’ departure as a signal of impending isolation and would calmly take up his resting position.

Steadily the owners were able to leave Holstein for longer periods, culminating in about one and a half hours without relapse. This reduced their level of stress and encouraged them to apply other suggestions for the longer-term management of the problem. The audible and visual signal of a wind chime hung above the living room door communicated a lack of availability of the owners for physical, eye or vocal contact for Holstein when they were at home. Using this signal to induce a state of calm resignation some 20 minutes prior to leaving the house enabled Holstein’s owners to avoid inducing anticipatory frustration in him with the usual signals of impending isolation, such as putting their coats on, gathering their keys etc. Without ‘breaking the signal’ by stopping to say goodbye to their dog on departure, they could then leave him for two or three hours in a calm state. On their return, they would ignore him initially while they took down the wind chime and then allowed him to indulge in a very excitable greeting and re-bonding display. The crucial human aspect of such unequivocal signalled emotional control is that owners find it far easier to introduce and apply as a technique than simply ‘ignoring their dog’, and far more acceptable as their life together can continue as normal when the signal is down. Holstein’s owners can now least now leave him alone and quiet long enough for Mrs X to contemplate a return to part-time work knowing that her dog is relaxed and that her neighbours are not disturbed.
Case 2: Bonnie

Bonnie is a two-and-a-half year old mongrel bitch, acquired from a canine rescue centre, now in her fourth home following a repeated SRP in each previous home.

**Presenting sign of SRP:** Attempts to escape from the house, causing marked damage to door and window frames, with Bonnie inflicting serious injuries to her paws. Duration of problem in present home: about 4 weeks.

Bonnie’s emotional state was clearly one of intense panic on being isolated, in this case from the lady owner in each of the four homes she had lived in. She had readily formed an intense attachment to her lady owners, to a level of emotional addiction that is all too common in ex-rescue dogs. This is almost certainly because even in the best of shelters, and even where dogs are housed in groups for company, they are effectively in a state of psychological withdrawal in terms of their bonding demands of a human parent figure. On being homed, they seem to rebound from this state of emotional withdrawal to bond intensely with a caring human companion very quickly and become addicted to the presence of that figure(s). They suffer from great withdrawal symptoms if they are then even temporarily isolated from them. Bonnie’s response to isolation in a relatively unfamiliar home environment was to attempt to escape, perhaps to seek out her owners, or perhaps simply to escape an environment which in itself had become associated with her desperate state of panic and trapped isolation fear.

Bonnie’s owners immediately acquired an indoor kennel with the intention of offering her a secure den and thus develop the calm, innately rewarding coping strategy of resting and sleeping when she was alone. Sleeping, eating, eliminating, drinking and hunting are all consummatory behaviours, i.e. innately rewarding to perform. This is because such behaviours automatically cause the release of dopamine (the ‘end-point’ neurotransmitter of the reward cascade referred to earlier) and its fixation to its target receptors. This engenders a feeling of well-being without any secondary reinforcement to the behaviours being necessary. Inducing one or more of these behaviours in SRP cases is often the key to success, e.g. providing a well-positioned secure bed to encourage sleep, or hide type chews to encourage chewing, offers the opportunity for the dog to develop coping strategies to relieve what is effectively a reward chemistry (dopamine) deficit when isolated.

Bonnie’s response to being shut in an indoor kennel and then left alone was, however, to break out, with a level of invigoration facilitated by extreme fear/panic. She physically bent the galvanised metal frame of the cage in the process! Then she set about trying to escape from the house by digging through the door, oblivious to any pain that she caused to her paws. It has been suggested that the feeling of reward and success, albeit minimal for a dog in such a state of acute reward deficit, is nonetheless so reinforcing to the escape behaviour that it persists as long as the dog has strength to continue and makes just a little progress. It has also been postulated that, as they are part of the ‘reward cascade’ that precedes dopamine release, opioids are available to function as pain relievers for the panicking dog and mask any feedback that pain may have on inhibiting self-damage in it’s attempts to escape and relieve its fear.

Clomicalm (2mg/kg body weight twice daily) was prescribed by Bonnie’s veterinarian, as a first step to relieve her extreme distress, prior to referring her for behaviour therapy for her SRP. Remarkably, the video footage taken subsequently shows Bonnie resting peaceably, occasionally grooming herself on a favourite armchair in her owner’s living room when she
Case 2: Bonnie

was left at home alone. No behaviour therapy was every necessary, and the medication was withdrawn without relapse of the SRP after three months!

While this case may seem somewhat remarkable, it seemed to indicate that the more emotional a dog’s response to isolation, and the more severe it’s attempts to resolve its fear, the more likely it is that Clomicalm could restore the dog to an emotional level of self-control. In such a calmer state it could then learn to perform a coping strategy to resolve its fear, with its arousal now muted by the anti-adrenergic effects of the medication. Bonnie learned that she could feel comfortable lying on the armchair when isolated and gain relief from the unpleasantness of being without her owner. Her own reward chemistry, perhaps assisted by the SRI effects of the medication, would help to reinforce resting as a successful policy. Having developed a coping strategy for herself, she then no longer needed the medication to support her, nor any other tactics of behavioural modification to help her.

Similar responses have since been described by other veterinarians prescribing Clomicalm for extreme cases of separation-related panic and highly destructive or self-mutilatory escape behaviour. However, it should not be assumed that a pharmaceutical approach alone will be appropriate in all cases of SRP, and especially not where the emotional state of the dog when left alone has yet to be confirmed.
Case 3: Ben

Ben is a one-year-old male black Labrador, owned by his present owners since he was since 12 weeks of age.

**Presenting sign of SRP:** Destructive chewing of household items.

Ben was taken to his veterinarian, his owners complaining of the commonest sign of SRP; destructive chewing. Ben chewed towels, tea towels and clothing when he was left at home alone, and was prescribed Clomicalm (2mg/kg body weight twice daily), again in an advance of referral to a behaviour specialist. However, Ben’s response after 10 days of medication simply served to speed his owners’ desire for a referral as he became even more destructive, chewing furniture legs, tearing up cushions and pulling down curtains.

Investigations showed that Ben was being left at home daily on weekdays for several hours per day while his owners went to work, with just a quick toilet break in the garden at lunchtime overseen by a neighbour. The video footage of his behaviour when left revealed a dog that was not anxious, panicking, depressed or angry at being alone, but simply one who was frustrated by a lack of stimulation in his environment. As much as he chewed his own toys, he calmly chewed anything else that came to hand. Chewing is a consummatory behaviour and so can be employed to relieve the frustration of boredom, acting in the same way as one might chew gum in the frustrating circumstances of athletic or intellectual challenge. It is therefore likely that the SRI effects of the medication simply added further feelings of reward to an already rewarding behaviour for Ben, hence the chewing problem intensified and became more diverse.

The medication was withdrawn and appropriate alternative husbandry measures were suggested to tackle Ben’s destructiveness. The aim of these measures was to provide more stimulation (i.e. inherently mildly frustrating but resolvable challenges) in the form of foraging toys such as the Buster Cube, which has to be manipulated by the dog to release the reward of food. Research carried out in the development of the Buster Cube clearly demonstrated how a simple lack of activity and stimulation correlates directly with the incidence and severity of behaviour problems in dogs. The therapeutic application of this toy, and other similar toys, in the treatment (and prevention) of many cases of SRP and destructive chewing resulting from boredom is now well accepted by behaviour therapists around the world. For Ben, the Buster Cube proved invaluable and was accompanied by the provision of lots of other chews and toys and the services of a dog walker during the day. The unwanted chewing and destructiveness then ceased abruptly.

These approaches to treatment may appear obvious in the light of the video evidence for a dog that was expected to be left alone for such a long period every day. However, it is very pertinent to note that Ben’s veterinarian was simply presented with the fact that he was destructive when left at home by his owners. They sought treatment for the problem, and quickly – a common enough scenario in both veterinary and behaviour practice!
Discussion

The cases of Holstein, Bonnie and Ben highlight the need for an accurate emotional assessment to be made prior to treating any suspected SRP, and one based on real evidence rather than the supposition that such dogs are suffering from anxiety when isolated. This is especially so if the assumption leads to the application of 'off the peg' standard behaviour modification approaches or prescription of anxiolytic medication which, in some cases, may disappointingly have little or no effect, or even make matters worse. (COAPE 2009). Indeed, it would appear most unwise to attempt any form of treatment of a suspected SRP without remote video film evidence to ensure that as accurate an assessment of the isolated dog’s emotional state can be made. Only then may behavioural and/or pharmaceutical and/or synthetic pheremonal treatment be targeted effectively. It is also vital that any respite gained by prescribing medication is combined with a process of 'signalled emotional toughening' to develop independence, tolerance and coping strategies for dealing with periods of isolation. This should be followed by subsequent withdrawal of the medication. ‘Hence the services of an indefatigable and immensely persuasive behaviourist are indispensable!’ (Walker 1999) in such cases!

Problem Prevention

Most veterinarians, dog breeders and many dog owners are familiar with the seminal work on puppy socialisation by the American behaviourists Scott and Fuller (1965). Their findings described how a dog’s social behaviour with people and dogs was crucially affected by its experiences from 3 weeks of age, but focussed more on two stages between the ages of 8 and about 18 weeks, that is, after weaning and before the onset of secondary sexual development. These influences are therefore likely to occur after a puppy has left its mother and its breeders’ home and so the responsibility for ensuring adequate socialisation and acclimatisation to life in the human den has therefore been assumed to lie predominantly with the new owner. But, this is not the whole story. Such responsibilities actually rest far more crucially than previously thought with the breeders of pet dogs, in pedigree breeds, crossbreeds and mongrels alike.

Puppies are born effectively blind and deaf and totally dependent on their mother for the first two weeks of life. However, once their visual and aural senses start to function, they are like little sponges, soaking up every possible piece of information from their environment and social contacts. From now on, they learn how to co-ordinate their social responses to their littermates, mother, human family and friends, family cat etc. They also learn how to deal with the physical features of their environment as they become able to explore further and further away from their nest. Wolves and wild dog parents may move the den site of their young up to five times between the ages of 2 and 5 weeks, each time to an increasingly more complex and challenging environment (Leidhold and Trummler 1994). This is vital to maximise the rate of their neurological development, and to help them learn to co-ordinate their improving physical capabilities. They can then learn to cope effectively with increasing levels of frustration in their lives, both social and environmental.

Such structured exposure is vital at this very early age while the young can only experience the limited emotional response of frustration in response to the denial of an expected goal, and will work to relieve that frustration by experimenting with alternative strategies. Once they reach about 5 weeks of age, puppies have a greater range of emotional capacity and become progressively more cautious. They can now start to feel and express greater
emotions of anger or later even rage at being denied an expected reward, or when things
don't go quite right socially. The more aroused their emotional state, the less able they are
to concentrate and work out appropriate strategies to resolve life’s challenges. If they
continue to lack sufficiently challenging opportunities for emotional development up to about
14 weeks of age, then they are destined to be abnormally reactive adults. They may then
fearfully avoid novelty and ordinary social opportunities and even respond aggressively to
the investigations of unfamiliar dogs and people as a coping strategy to deal with their fear.

In short, if they are not exposed to enough stimulation to facilitate their emotional
development from the age of 3 weeks, young dogs may lack the necessary emotional range
and gregariousness to cope with life as a pet and so fail in this role. They may be rejected
and abandoned by their owners in animal rescue shelters or simply euthanized by
veterinarians for behaviour problems associated with lack of emotional control and
behavioural development. This fate results for many dogs in spite of the remedial attempts
of instructors at puppy classes when they are still only a few weeks old, at training schools
when adolescent, or in response to individual behaviour counselling as your adults.

Considerations of early experience are also crucial in how a dog learns to cope with the
frequent periods of social isolation from his human family that are usually an expected part
of his life as a pet. Wolves start to separate each cub from its litter and from the pack for a
few moments at a time on a regular basis from the age of about 3-4 weeks. (Leidhold and
Trummler 1994). The cubs don’t panic simply because they are as yet unable to experience
or express this level of emotionality. Instead they start to learn how to amuse themselves
calmly on their own in their immediate environment, or simply to lie still and await the
return of an adult. A puppy will experience higher levels of emotional distress if he only finds
himself isolated for the first time after 5-6 weeks. His greater level of arousal will be far less
conducive to resolution and he will lack the memory of early experience of solitude. He will
already be less able to make the calm decisions that may help him regain contact with his
group or develop alternative strategies to relieve what is now the fear and vulnerability of
being isolated. The older he is, the greater his emotional response and the more resistant he
will be to therapeutic attempts to help him learn to manage his arousal more effectively.

Veterinarians and behaviourists alike should therefore encourage dog breeders to be aware
of this vital early attention to the emotional development of puppies. Frequent short periods
of isolation should be introduced for puppies at about 3-4 weeks of age and the physical
complexity of their rearing environment should be increased steadily as they start to
explore. Simple enrichment of their environment, such as by providing ramps up to new
levels, tubes, boxes, holes etc, and hiding food rather than offering it in bowls, can make all
the difference to a puppy’s ability to develop a proper range of behavioural strategies to
deal with the frustrations of life in a human home later, whether in company or ‘home
alone’. With such early attention, the incidence of Separation Related Problems presented in
dogs in veterinary and referral behavioural practice could be expected to fall dramatically.
References

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