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DEALING WITH SOUND PHOBIAS
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Introduction

The most commonly reported phobias in the domestic dog population are sound phobias and in a recent study in the UK fireworks (38%) and thunderstorms (31%) were found to be the most common triggers for referred cases of canine sound phobia in a behavioural medicine referral practice population (Gilbert B 2003). In the literature fear of fireworks is often included in the broader category of fear of loud noises (Overall 1997) and due to the generalisation effect associated with the phobic condition it is common for multiple triggers to be present by the time dogs reach the stage of referral for behavioural investigation. In the Gilbert study over 40% of the dogs displayed multiple sound phobias to a limited range of sounds (less than four). No significant difference was found between the breeds or breed classes of dogs suffering from sound phobia and a randomly selected population of non-phobic dogs referred to the same practice, but there was a significant difference in the average age of referral between those dogs in the non-phobic and phobic populations. This age difference may be explained by a number of factors. The symptoms of noise phobia are less likely to induce public concern or place the owner in a situation of potential prosecution than other behaviours, such as aggression or unwanted vocalisation, and as a result there is a tendency for owners to attempt to manage the behaviour themselves without asking for professional assistance, or to tolerate sound phobias, particularly when they are seasonal in nature. In addition the use of medication which enables owners to mask their pet's symptoms may encourage them to delay seeking proactive intervention but in cases where such medication actually serves to sensitise the dog to the phobia inducing stimuli the resulting worsening of the phobic condition may result in the owners seeking professional assistance at a later date.

Presentation of sound phobias in dogs

Fear related behaviour in response to sound stimuli might be an adaptive response, especially when the sound is potentially indicative of impending threat or danger. Indeed fear is a potentially adaptive emotional response and one that is important for the survival of the individual. However, when the danger or threat is a perceived one the fear can become maladaptive and while some sound sensitive dogs may display a graded fear response, which is in proportion to the perceived threat, others will progress to a phobic state which involves an all or nothing emotional response which is always maladaptive and can seriously affect the individual by limiting its ability to engage in normal behavioural responses. The behavioural manifestations of

sound phobia vary from the inhibited responses of whining, panting and salivating to the more reactive responses of running and escaping (Shull-Selcer and Stagg 1991 and Thompson 1998). In some cases those responding in a reactive manner may injure both themselves and their environment in their frantic attempt to escape from the object of their phobia and it is this population of dogs that are most likely to be referred for assistance at an earlier stage in the development of their problem behaviour. Those dogs that pace, tremble and cower (Shull-Selcer and Stagg 1991) or show a desire to remain in close physical contact with their owner (Thompson 1998) may be interpreted as milder cases of sound phobia but the selection of an inhibited coping strategy does not necessarily indicate a reduction in the severity of the phobic response.

Exclusion of medical differentials

It is essential when investigating a potential phobia case to rule out the medical differentials for the behavioural symptoms that are being exhibited. This is especially important when the use of psychoactive medication is being considered. Some of the differentials can be excluded on clinical examination and medical history but others will involve a combination of these approaches and the use of further diagnostic tests. Once the medical differentials have been excluded the choice of medication for the phobia will depend on whether a short or long term approach is appropriate.

Medical differentials for phobia cases	
Medical conditions affecting sensory perception	Medical conditions affecting cognition
	Seizures
Partial deafness e.g. in upper range	Brain tumours
Touch hypersensitivity (hyperaesthesia)	Dementia
Blindness	Hepatic disorders
Dementia	Pain foci
Old age changes (non-dementia)	Thyroid disease
	Cushing's disease
	Addison's disease
	Iatrogenic – acute or high level chronic use of steroid medication

Pharmacological therapy

The traditional pharmacological approach to sound phobias has been the use of medication, which prevents the expression of the unwanted behavioural responses and sedatives and tranquillizers have fulfilled this requirement well. However, over recent years there has been an increasing awareness of the potential behavioural consequences of using such medication including problems of sensitisation to the phobia inducing stimuli and a resulting worsening of the phobic condition. As a result the use of phenothiazines, such as acepromazine, is now considered not only outdated but also wholly inappropriate (Thompson 1998, Bowen and Heath 2005, Overall 2002). Alternatives are available and these appropriate medications can be used either as a short term strategy to enable a patient to deal with an inevitable event or circumstance, or as a long term treatment, which assists in the application of behavioural modification techniques over a period of weeks and months. The aim in these two scenarios is very different and the drug classes that are appropriate will also differ.

In the case of short term management one of the aims of drug treatment is to limit the negative consequences of the phobic event and the memory blocking properties of the benzodiazepines make them ideally suited for this purpose. Indeed one author states a belief that “benzodiazepines are essential for the treatment of sporadic events” including profound fear, anxiety or panic relating to thunderstorms or fireworks (Overall 2002) but a potential limitation for this use is the fact that they must be given to the patient before the anticipated event and therefore depend on the owner’s ability to predict the onset (Thompson 1998).

In contrast the long term drug strategies involve the administration of daily medication over a period of weeks and months and the aims are to improve the response to behavioural therapy, to prevent worsening of the phobia through generalisation and to improve animal’s quality of life where panic or behavioural inhibition are present (Bowen and Heath 2005). Choices will depend on the primary presenting signs in the individual cases but in general terms those dogs that show inhibited behavioural responses, such as shaking, dribbling and social withdrawal, will benefit from therapy with a mono-amine oxidase B inhibitor, such as selegiline, while those individuals which exhibit panic and bolt for home or dive under the bed are more likely to require medication with one of the SSRIs, such as sertraline.

Pheromonotherapy

Recently there has been considerable interest in the application of pheromonotherapy as part of the therapeutic regime for the sound phobic dog and results of a study in the UK suggested that this treatment strategy alone could produce significant results (Sheppard and Mills 2003). Certainly clinical experience suggests that the product DAP (Dog Appeasing Pheromone) can

be extremely beneficial in the management of sound phobia cases and preliminary investigations suggest that it may enhance the effects of concurrent behavioural modification techniques

Behavioural therapy

The basis of the behavioural modification approach to sound phobias is the application of the learning principles of desensitisation and counter conditioning and it is important to remember that both of these components are necessary if there is to be any long term resolution of the phobic condition. Two of the main barriers to the successful application of behavioural modification in the treatment of sound phobic dogs are a misunderstanding of the learning theory involved and practical limitations of using recorded sound to imitate a real life experience.

Desensitisation

This is the process which is used to reduce the dog's emotional reaction to the phobia inducing stimulus and it involves repeated neutral presentation of stimulus alone. Since dogs adapt most readily to static, unchanging stimuli the noise needs to be presented in this format during the desensitization phase of treatment. A soundtrack that appears to be continuous but is in fact made up of many closely spaced and overlapping loud noises that sound like a continuous stream can be very beneficial for this stage of treatment. The noises should all be set at about the same intensity so that on balance there is very little variation and the aim is to play sounds at a level that is below the threshold for inducing a fear reaction. In other words it is desirable for the dog to notice the sounds but not to flee from them. Once the dog is not showing any sign of reaction to the noises the volume can be increased to a slightly higher level and once the dog begins to show some recognition it is important to stop the increments and continue exposure at that increased level until the dog shows no fear of the stimulus. Only once the point of no recognition has been reached should the volume be increased any further. Through a process of repeated exposure and gradual increase in sound volume the dog ceases to react to the noise at any level and it is at this point that the process of counter conditioning can begin (Bowen and Heath 2001).

Counter conditioning

This second process involves the conditioning of a new and different emotional response to a stimulus that already evokes an emotional reaction and by first reducing the level of fear by using the process of desensitisation it is then far easier to associate the noise with something positive and enjoyable. The aim of counter-conditioning is to repeatedly present the same stimuli, in this case a sound, but in association with an activity that the dog is known to enjoy such as eating or playing. The ultimate result is a strong emotional response of relaxation and pleasure which is in direct conflict with the fear that was previously present and this has a blocking effect that

reduces the risk of relapse by limiting the possibility of both re-sensitisation and generalisation (Bowen and Heath 2001).

Environmental management

Even when behavioural modification techniques can be successfully applied it is important to take steps to assist in the short term management of unavoidable phobic events. This will help to prevent progression of the phobia to a more serious level and avoid other complications such as generalisation, contextual fears and the development of related problems of destructiveness and separation related behaviours.

Successful environmental management involves making preparations for known phobic events by providing a reliable escape place, which must be constantly available to the dog. The hideout should be positioned so that the intensity of the phobic event will be minimised and ensuring that the area is quiet and dark will be beneficial. In addition the application of pheromone therapy in the form of DAP (dog appeasing pheromone) may serve to further increase the appeasing nature of the hideout environment.

Other short term management strategies will include limiting exposure to phobic stimuli if possible and avoiding potentially traumatic events which could become associated with the phobic experience.

Conclusions

Canine sound phobias are relatively common and the effects on the quality of life of the dog concerned can be significant. Left without appropriate therapeutic intervention such conditions are likely to worsen, not only in intensity but also through the effects of generalisation, and from a welfare perspective alone it is appropriate for veterinary surgeons to give advice about appropriate therapy.

The cornerstone of such therapy is the application of the principles of desensitisation and counter conditioning, which is best achieved through the use of purpose made CD recordings, but it must be recognised that this approach is time consuming and demands a high level of owner commitment. The use of DAP is therefore recommended in order to reduce the dog's underlying level of anxiety and to increase the speed of response to the processes of desensitisation and counter conditioning. It can also be used in the short term management of phobic events (Sheppard and Mills 2003) as an alternative to conventional pharmacological intervention but can prove to be a useful adjunct to the use of appropriate medication. In addition DAP can be beneficial in increasing the appeasing qualities of provided hideouts thereby encouraging the selection of natural coping strategies which can help to control the negative consequences of the phobic response.

References:

Bowen J and Heath S E (2001) *Desensitisation CD Instruction Manual* Sounds Scary Ltd Chester England

Bowen J and Heath S E (2005) *Behaviour Problems in Small Animals – Practical advice for the veterinary team* pp 86-90 Elsevier Limited

Gilbert B L (2003) A retrospective study of dogs presenting with noise phobia at a behavioural referral centre. Final year veterinary elective project Liverpool University UK

Overall K (1997) Fears, anxieties and stereotypes In *Clinical Behavioural Medicine for Small Animals* pp 209-250 Mosby, London

Overall K (2002) Noise Phobias in Dogs In Horwitz D, Mills D S and Heath S E (Eds) *BSAVA Manual of Canine and Feline Behavioural Medicine* pp 164-172 BSAVA England

Sheppard G and Mills D S (2003) Evaluation of dog-appeasing pheromone as a potential treatment of dogs fearful of fireworks *Veterinary Record* 152: 432-436

Shull-Selcer E A and Stagg W (1991) Advances in the understanding and treatment of noise phobias *Veterinary Clinics of North America: Small Animal Practice* 21: 353-367

Thompson S B (1998) Pharmacological treatment of phobias In Dodman N and Shuster L (Eds) *Psychopharmacology of Animal Behavioral Disorders* pp 141-182 Blackwell Science, Oxford, England