



Behavioral Disorders in Companion Animal - a review

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Abstract

Behavioral disorders in Companion animals are less discussed pathological condition in clinical medicine. The complexity of behavioral disorder is more in animals when compared to humans, which interfere and deteriorate the functioning within family, and environment. Animal psychopathology is the study of mental or behavioral disorders in animals that encompass the full range from normal to abnormal, and include multiple literature of influence from genetics, environmental. In this paper, collection and organization of information is about behavioral problem in companion animal along with a clinical approach to treat these disorders.

Keywords: Behavioral Disorders; Anxiety; Phobias; Aggression; Repetitive Behavior

Abbreviations

SADs: Separation Anxiety Disorders; 5-HT: 5-Hydroxytryptamine

Introduction

Behavior is a complex adaptive activity of an animal, during which it senses the external world and accordingly responds to stimulus, and the internal state of its body.

Cats and dogs inculcate various behavioral disorders which are due to the owners' inefficiency to provide care, food, and temperament, and providing the animals' essential requirements (needs for movement, game, exercise, diversity of habitat, social contacts, etc.).

Behavioral Problems are a major cause of abandonment in many countries [1]. Behavior is undesirable, there are three level of consideration in companion animals, which are as follows

- Behaviors within the normal range
- Behaviors which are more challenging, and are beyond the normal range
- Behaviors that are abnormal, pathologic due to emotional or mental health issue.

Behavioral problems are categorized on the basis of medical problems [2], which can change behavior directly or indirectly are

- Prevent the perception of the environment (Blindness)
- Change in the processing of the perceived information (Intracranial tumor)
- Prevent the expression of behavior (Fractured leg).
- Problems that produce a stress response that can modify behavior (Pain).

Behavior within normal range, pet parent needs special guidance on how to effectively manage these behaviors, behavior beyond normal ranges involve, urination, mouthing, mounting, barking, chasing, predation, or overactivity and these cases requires counseling, and in worst cases animal undergo environmental, managemental and behavioral modification. Behavior that are pathological and abnormal, which might have developed due to genetic disorders, stressful fetal and neonatal conditions [3].

Phobias, Separation anxiety, Repetitive behavior, Aggression, are some behavioral disorders exhibited by dogs, along with these cats also exhibit other signs as well which involve scratching, climbing to elevated areas, nocturnal activity, attention seeking, chew-

ing, attempts to escape the home, etc. are examples of behavior [4]. Although there has been a lot of research going into the relationship between medical and veterinary behavioral issues, there are still some doubts. On contrary, it can be said that all the behavioral problems are not due to medical changes.

Behavioral description

The combination of eliciting stimuli of behavioral components that underlie barking growling, or biting are identified as behavioral issues.

Aggression

Aggression refers to threatening behavior or harmful attacks and can range from subtle changes in body posture, irregular facial expressions, and vocalization to biting. Aggression in cats and dogs poses a significant danger to human health as well as animal protection [5].

Aggression is of eight types

- Fear-elicited aggression
- Dominance aggression
- Possessive aggression
- Protective aggression
- Predatory aggression
- Punishment-elicited aggression
- Pain-elicited aggression
- Intra-specific aggression

Fear and phobias

Fear is a normal response to an actual or perceived threatening stimulus or situation. Anxiety is an agitation when an animal foresees a threat or fearful situation. Phobia is an amplified-fear response.

Some behavioral presentations include the following

- Fear of other dogs, mainly those who are completely foreign, appear to be threatening, or with whom the dog has had a bad experience.

- Fear of strangers, particularly those who are new to the dog or who seem to, act, or smell differentially than the dog is used to (ex. young children)
- Inanimate stimuli, such as loud or unfamiliar noises (instances: construction work, trucks, gunshots), visual stimuli (examples: umbrellas, hats, uniforms), environments (instances: backyard, park, boarding kennel), or a combined effect of stimuli (ex. vacuum cleaners, car rides).

Phobic responses in dogs are generally associated with loud noises (ex. thunder, fireworks, gunshots) and the stimuli associated with these events, including rain, lightning, and perhaps even static or pressure changes associated with a thunderstorm.

Separation anxiety disorders

Separation anxiety is a behavioral syndrome of dogs characterized by signs of distress when the affected dog is left alone or is separated from the person to whom it is attached [6]. SAD symptoms can undermine the human-animal link. because of unresolved underlying cause, which may lead to emotional and financial damage and ultimately disruption to animal life.

SADs leads to phobic disorders, destructiveness, excess salivation, and urination or defecation. In addition to these signs, clinical signs are also exhibited which are a sign of separation anxiety includes distress vocalization, escape behavior, and self-trauma. Some other behavioral signs are pacing, circling, and many similar actions. Along with behavioral signs, autonomic signs tachycardia, tachypnea and trembling are exhibited, circling, and many similar actions.

Identification of behavioral disorders

The veterinary team could perhaps respond quickly to the first signs of discomfort by identifying stress signs and correcting the interaction accordingly. Early identification leads to ease in management and treatment of Behavioral Problems.

Dogs' ears are facing backwards or flattened, and other signs of fear or stress include a lowered posture, a lowered or even tucked tail, panting, increased salivation, trembling, and the emptying of the anal glands, while cats shrink themselves. Pupils are extremely dilated, and the tail is kept near to the body. In cats, tail swaying indicates agitation, annoyance, or a high level of arousal. Cats may crouch, hold their ears downwards, hiss, or squeal when displaying

stress levels, but they can also stand on tiptoes, holding their tail stiffly upwards or downwards, and appearing larger due to pilo-erection. When the pupils are oblong and inner pinna is displayed, aggression is imminent [7].

Dogs with separation anxiety may exhibit signs of Hyper attachment, which includes behavior oriented towards the owner such as following the owner, leaning against, or resting on the foot. As the owner initiates his or her departure ritual, such as clinging keys, putting in work attire, or putting on shoes, most dogs with anxiety appear hyperactive, clingy, or immobile. Signs include urination or defecation or attempts to hide, whilst previously cats have been viewed as anti-social or asocial, however, studies suggest that cats do form social bonds and may develop separation-related anxiety

syndrome. Therefore, they also show behavioral and physiological reactions due to the owners' absence.

A lack of personal experience (social deprivation (isolation) in the first months of life); environmental elements or stressful situations; exposure to strong aversive external irritants (causing hostility, disgust, perceived as punishment - fireworks, small noisy children, unwanted stroking and squeezing, cruel punishments, attack of other dogs and cats, and so on) are also among the reasons. excessive praise (encouragement) from the owner (unintentional "taming" of unwanted behavior, such as asking for food, attracting attention, and reacting aggressively to strangers and other dogs), as well as problems caused by species-typical behavior (cats scratches furniture, dog's aggression towards each other, need for movement, marking territory, desire to dominate)[8].

Clinical Signs	Medical Diagnosis Differential	Behavioral Diagnosis Differential
Destructiveness/Escape Behavior	Hepatic Encephalopathy	Play/unruliness/Phobias/Anxiety/Cognitive dysfunction/Territorial aggression/Frustration/inadequate exercise
Urination in the house	Seizures Cystitis and other lower urinary tract infection, Neoplasia, Endocrine disorder, Inadequate urinary bladder capacity	Insufficient housetraining Inadequate opportunity for elimination Submissive display Excitement urination Urine marking Thunderstorm/noise/Thunderstorm/noise/another phobia Cognitive dysfunction
Defecation in the house	Cholitis Diet Parasites Causes of increased fecal volume or frequency	Insufficient housetraining Inadequate opportunity for elimination Thunderstorm/noise/other phobia Cognitive dysfunction
Hypersalivation	Toxin exposure	Thunderstorm/noise phobia Inadequate opportunity for elimination
Pacing, circling	Central neurologic disorder	Thunderstorm/noise phobia Canine compulsive disorder
Self-trauma (acral lick)	Neuritis Dermatitis Foreign body Hepatic encephalopathy Other primary dermatologic disorder	Canine compulsive disorder
Vocalization	Dementia	Social communication Play Territorial barking Arousal barking (response to outside stimuli) Thunderstorm/noise/other phobia

Table 1: Differential Diagnosis for signs associated with behavioral disorders.

Endocrine diseases and behavioral problems

Thyroid hormones play an important role regarding behavioral control, as brain is targeted by these thyroid hormones, which leads to the alterations, and it have been associated with behavioral problems in animals, as well as humans. Imaging studies provide enough evidences which suggests the alteration in brain structure and function in hypothyroid patients, with decreased hippocampal volume, cerebral blood flow, and function that mediate attention, working memory, and motor speed in humans and in rats. A recent study showed that some of these alterations in working memory and abnormalities in functional magnetic resonance, were no longer present after six months of treatment with levothyroxine [9].

Management and treatment

Change in management and treatment can bring a quite positive result in the mitigating and controlling behavioral disorders like fears, phobias, separation anxiety disorder and many.

Primarily discuss on the following problems when diagnosing behavioral issues (i) an understanding of normal behavior which relates to the problem, ii) read body language and facial expressions of animal, iii) ensuring that all of the essential needs are met, iv) reviewing the principles of learning and reinforcement-based training to prevent further incidents.

Environmental control, behavioral modification, and medicine are all used in management. Environmental management refers to strategies for reducing “panic attacks” by establishing a conditioned response to the owner’s departure and ensuring a safe area for the dog to avoid self-injury and property destruction. The use of a crate, restricted area is effective for dogs that are trained to this confinement [10].

Treatment involves use number of medications, to treat separation anxiety, fears and phobias, aggression in companion animals. Clomipramine (Clomicalm, Novartis) and fluoxetine (Reconcile, Lilly) are such drugs which are used for separation anxiety and are approved drugs. Both drugs are accompanied by well-designed behavioral instructions targeted to pet owners; both are label restricted for aggression. Clomipramine, a tricyclic antidepressant, while Fluoxetine, a selective serotonin reuptake inhibitor (5-HT).

Conclusion

The diagnosis, therapy, and reason for the behavior should all be examined. Finally, the owner should be offered a prognosis that incorporates realistic short- and long-term expectations. Behavioral disorders are treatable, which should not be the reason for animal abandonment. Positive reinforcement must be the top priority in treating behavioral disorders. I believe behavioral condi-

tions should also be emphasized as pathological conditions, and be applied in clinics, when taking anamnesis (history) of the patient.

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