

Involutive Depression In Ageing Dogs

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During the last ten years, the dog's life expectancy has increased. For this reasons, dog's owners and veterinarians are confronted with the consequences of cerebral ageing. Specific behaviour disorders are observed in this kind of population. The clinical behavioural changes resemble a state of chronic depression with clinical signs of regression. The dog seems to return to an infantile state.

Clinical Description

Behavioural problems occur in any breed, about 7 to 10 years old. A lot of alterations in social and scanning behaviours, in sleep, elimination and so on can be described. Social behaviours are also modified. Ageing dogs with involutive depression interact less frequently or intensively with their owners (loss of social skills). We note loss of housetraining in a dog that was previously well housetrained. Socially they seem to lose their ability to be dominant and even to interact with other dogs. Normal dogs sleep up to 80% of the day, with sleep occurring in many short cycles throughout the day and night. Increased time spent sleeping appears to be a common occurrence in old dogs. On the other hand, restless behaviour, especially during the night, can be a significant problem. Alteration of the normal sleep-wake cycle is noted. The dog wakes up more frequently at night and may interrupt the owner's sleep by vocalisation and groaning. Some old dogs bark for no apparent reason and we note excessive vocalisation. It is common to observe house-soiling when the dog wakes up during the night, but it also occurs during the day. The dog is not incontinent but may fail to inhibit urination or defecation in inappropriate locations. Some dogs will eliminate under themselves whilst still in their box. Exploration (scanning) can be observed using the mouth, like a dog under 3 months. This can be complicated by ingestion of foreign body (non-dietary objects). Destruction may be observed during periods of separation from the owners similar to those that we observe in separation anxiety. A particularly noticeable change is that of disorientation, which is commonly manifested in dogs behaving as though they are lost in the house or garden, staring into space and sometimes no longer recognising family members. Generally, fear of usual stimuli appears in the beginning of this disorder (cars, rain, noise, phobias, men). The behaviour of the dog seems to return to an infantile state, indeed many dog owners describe their dog as an elderly puppy.

Aetiology

Behaviour problems in an old dog sometimes appear to have a medical basis. All patients should receive a thorough physical examination. Some of the causes of behavioural changes reflect reduced functioning of various organ systems, for example loss of visual and hearing ability, reduced cardiovascular and pulmonary functioning which limit a dog's exercise capacity. Many biological and behavioural factors could induce the development of an involutive depression. But what is important are the disturbances in the endocrine system, particularly the hypothalamus-pituitary-adrenal axis like

hypothyroidism, hypercorticism (spontaneous or iatrogen) that may secondarily produce changes in behaviour. It's important also to look for diencephalus tumours. But with careful questioning of the owners, it may become apparent, that what some owners report as problems that have only just developed, may have been developing for some time and have only just become serious enough to warrant help to resolve them. Behaviour problems in old dogs can be newly acquired or the continuation of problems that began earlier in life. However, anxiety is one of causes. A state of anxiety, untreated at the adult stage or treated inappropriately (sedative neuroleptics) may lead to chronic depression. A further cause of involutive depression is also the cessation of usual activities in working-dogs (military and hunting dogs). Leading to a breakdown in housetraining. Elderly dogs are particularly susceptible to changes in their lifestyle which increase the probability of developing an involutive depression. After the cessation of training we can observe emotional disorders developing. Many factors could explain this phenomenon: may be a hyperattachment could appear between the driver and the dog during the working period. But, it is possible that the hierarchical situation of the dog is modified by the cessation of the activity. Another prominent cause is the introduction of a new young dog into a family who already own an elderly dog leading to induction of a depression in the aged-dog.

Treatments

If we have a disturbance of endocrine system, we have to treat the endogenous disorder. If the involutive depression is exogenous, we need simultaneous behavioural therapies and drugs. However, the dogs age and physical disabilities need to be taken into consideration when planning behaviour modification programmes or prescribing drugs. Because of age related changes in drug distribution, metabolism and excretion, drugs to modify behaviour in old dogs should be chosen with careful consideration of their side effects. Antidepressant drugs seem to be able to treat these behaviour disorders quickly. One of antidepressant drugs is clomipramine at 0,5 to 2 mg/kg BID orally over a 3 month period. This drug has many potential side effects that may be of particular concern with old dogs. These include tachycardia and anticholinergic properties such as constipation, urinary retention and dry mouth. Because this drug has anticholinergic effects, clomipramine is efficacious in house-soiling. This drug is contra-indicated in animals with cardiac diseases so we have to look at cardiovascular and renal function before the prescription of this drug. Sudden withdrawal of the drug should be avoided with the dose being reduced gradually. If house-soiling is absent another good antidepressant drug is selegiline, 1 mg/kg SID orally for 3 months. There are no side effects and no contra-indications. Some drugs like benzodiazepines are not used because of the side-effects. Antidepressant drugs seem to be able to treat these behavioural disorders quickly, but we need to use behavioural therapies as well. The owners must play with the dog and stimulate the relationship. To cure the manifestations of fear in these aged dogs, behavioural therapies are needed, such as desensitisation and to see again the dog after one month of treatment.

In conclusion it is going to be very important to be aware of this situation with elderly dogs because veterinary medicine is increasing the dog's longevity and the population of depressed aged dogs will consequently increase. Veterinarians are the most qualified to reassure owners that the dog with behaviour problems is, in fact, healthy, and to accurately assess and manage a medical problem that may be contributing to or causing the behaviour problem.

References

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