BEHAVIOURAL OR MEDICAL?
ANXIETY DISORDERS IN OLDER ANIMALS

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Introduction

Senior pet care is an increasingly important component of modern veterinary medicine. The first indication an owner has of any problem with their dog is a change in its behaviour. Some of these problems will be due to medical reasons, others due to behavioural reasons and some due to a combination of both. The senior dog may have distinct and specific behavioural changes and it is important for veterinary surgeons to recognise the underlying mechanisms for these in order to differentiate and correctly diagnose the problem. This knowledge will enable them to offer the best options for the treatment and management of behavioural problems in the senior dog.

Age affects us all and as dogs mature their behaviour changes as a direct result of the aging process. By the time they are “seniors” their sight and hearing, as well as other senses and general mobility, may become more impaired and hence their perception of the world alters. This may manifest as a number of behavioural changes such as alterations in eating patterns, sleep wake cycles, vocalisation and even in the response to their owner. There is also an increase in anxiety disorders. An understanding of ageing and how it affects the pet is important in order to give appropriate advice on how to manage these problems and to help older animals continue to live in harmony with their owners.

The first indication that an animal is unwell is that the animal's behaviour changes. This change is what usually prompts an owner to make an appointment to see their veterinarian. The behavioural changes are often attributed to either a behavioural cause or a medical / organic cause. However, the relationship between medical problems and behavioural problems is often more intimate. The line between behavioural and medical diseases can at times be somewhat blurry and more importantly sometimes there is no line at all. Behavioural and medical problems can co-occur and this needs to be recognised.

With any problem, medical or behavioural, the predisposing factors need to be identified and then addressed. In order to resolve a behavioural problem a thorough behavioural history, as well as a clinical examination is necessary. Medical reasons need to be examined, treated or eliminated as contributing factors. Sometimes these behavioural signs are in fact part of another behavioural complex and this also needs to be considered when advising a treatment protocol.

Canine Senses
In order to better understand how an animal behaves it is important to know how it actually perceives the world. Dogs have very different sensory capacities and hence their perception of the world will not be the same as ours. This will affect the way they communicate with members of their own species and with other species, including us.

As animal age their senses and therefore their perceptions of the world change. This can have a major affect on how the dog behaves and will also impact on how confident the dog will feel. For example a loss of the sense of sight may lead to the dog feeling more anxious when in unfamiliar environments.

- **Sight:**

Dogs can discriminate between colours, however they do not see the full range of colours that people do. As they are predators they are very sensitive to moving objects but have poor visual acuity.

- **Hearing:**

The hearing of a canine is considered to be four times more acute than man. They can hear can hear higher frequencies and can hear ultrasonic noises.

- **Smell:**

A dog’s sense of smell is its predominant sense and it is thought to be about 1,000 times greater than that of man. A dog can discriminate between thousands of different odours and can detect very low concentrations of odours.

- **Taste:**

Gustation is relatively poorly developed compared to the other senses. Dogs like sweets and the palatability of a food is based on odour, mouth feel then taste. Studies have shown that they prefer beef over pork and lamb and prefer meat to cereals. They tend to eat during the day.

- **Touch:**

This sense is well developed. Dogs feel pain and this should always be a consideration when treating dogs that present for a change in behaviour. Many dogs enjoy being massaged.

**What is Aging?**

Owners often detect that their pet’s behaviour is changing as it ages. The behaviour may change rapidly or so slowly over time that it is almost undetectable. The animal slows down, their eating patterns may change, they may start having accidents inside and even their response to their owner or the environment may be less enthusiastic. Often such behaviour changes are considered by the owners to be just part of normal aging and they presume that nothing can be done. Hence it does not prompt a visit to the veterinarian and the owners continue to live with their pet until they can no longer tolerate these behaviours and the animal is euthanised.

However, these behavioural changes may be due to medical reasons, for environmental reasons as well as behavioural reasons. Thus a thorough physical check up including blood work should be carried out in all older pets that exhibit any behavioural changes.
So what is “normal” aging? What is certain is that cognitive decline does not have to be a part of “normal” aging and signs such as disorientation, decreased social interaction, inappropriate elimination and changes in the sleep wake cycle may be due to many reasons.

To help older animals cope it is important to determine what the actual cause of the problem may be and then devise a management program.

For example, when an owner says their 15 year old spayed female dog has recently started have accidents inside a thorough clinical examination as well as careful questioning is needed in order to differentiate between a medical problem (e.g., diabetes, renal failure, cystitis, incontinence and osteoarthritis), an environmental reason (e.g., the door is now shut at night, owners have done renovations and access to the outside is more difficult) and a behavioural cause (e.g., separation anxiety, canine cognitive dysfunction syndrome).

It may be that there are several reasons for the problem, medical, environmental and behavioural. Most diseases are, in fact, expressed with changes in behaviour

**Diagnosis:**

A behavioural problem may be defined as the manifestation of normal behaviour that occurs in inappropriate circumstances. Thus, when presented with a behavioural problem the list of differential diagnoses must include normal but inappropriate behaviour (which may be learned or innate). Spraying and scratching are good examples of normal behaviours that present a problem for some cat owners because of the inappropriate circumstances in which the cat performs them while urine marking and barking are some canine examples.

The differential list must also include abnormal behaviours, which may be the result of either behavioural problems for which there is no recognised medical cause and/or medical problems.

In the case of the normal but inappropriate behaviours the owner needs to appreciate the natural behaviour patterns of the animal and either learn how to modify the behaviour, how to modify the environment or learn to accept the behaviour depending on which is appropriate in that individual case.

Abnormal behaviours are also inappropriate but they can also be classed as being maladaptive i.e. they perform no useful function in ethological terms and may even be self-destructive.

Some abnormal behaviours are due to systemic medical conditions i.e. organic disease. In some cases the behaviour may be directly caused by the disease process e.g. behavioural changes associated with hepatic encephalopathy and in others the behaviour change may be a general symptom of an unwell animal e.g. lethargy and anorexia.

If an animal presents with behavioural signs it is essential that physical causes are excluded and treated before behavioural causes are investigated further. Thus a thorough medical history and a full physical examination is essential. This may also involve a neurological examination, blood tests (FBC and biochemistry panel), urine tests, radiography or even more specialised tests depending on the differential diagnoses. This may depend not only on the clinical signs but also taking into consideration of the age, breed and sex of the animal.

There are situations where a medical disease may manifest with behavioural signs, and the patient may be classified as having a behavioural problem. Some of the
organic causes of behavioural changes will be discussed as well as some of the
presenting signs. Behavioural changes may be seen in the following disorders the
brain including congenital abnormalities, neoplasia, infections (bacterial, viral,
fungal), parasitic conditions, trauma, disturbances of the blood supply (cardiovascular
disease), metabolic diseases, toxicoses, developmental disorders and senile
changes.

Treatment / Management:

Clients need to understand that like most behavioural problems old age problems
can be successfully managed but not necessarily cured. Treatment involves directly
addressing the physical as well as behavioural causes and implementing
management strategies that may involve environmental modification as well as a
behaviour modification program. Once the veterinarian has diagnosed the problem
the role of the nurse may be to discuss behaviour modification and environmental
management options.

The veterinarian will be able to identify any underlying medical problems and then
treat, if possible. Then management techniques can be discussed by the veterinary
nurse. These may include such options as providing a ramp for the dog to use if the
stairs are a problem. Taking the dog out more frequently, ensuring that the dog has
urinated prior to coming back inside may also be necessary.

Cases that have an anxiety disorder as an underlying cause respond well to a
behaviour modification program in combination with psychotropic medication (eg
clospiramine, amitriptyline, fluoxetine). Separation anxiety often appears in older
dogs and these need to be treated by the veterinarian or the veterinary behaviourist.
Nurses can assist by providing behaviour modification services and helping owners
teach calm and relaxation techniques. Another important role for veterinary nurses
can be providing the emotional support for clients as most anxiety disorders need
ongoing care.

In cases of cognitive dysfunction a number of therapeutic treatment options (eg
nicergoline, selegiline, propentofylline) are available that may help in these cases.
Additionally diets such as Hills B/D can be useful adjuncts to therapy. Again a
thorough veterinary examination is important before any treatment / management
options are recommended.

Punishment should never be part of any recommendation for dogs with any
behaviour disorder.

References and Further Reading:

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