**Case study - Canine Cognitive Dysfunction (CCD)**

**- What is it?**

It is a dementia-like syndrome that occurs in approximately 15% of older dogs.

Things to consider:

Neurological degenerative disorder characterised by gradual cognitive decline and increasing brain pathology. Progression of the clinical signs is very gradual and owners may fail to recognize the dysfunction is happening.

Elderly animals are less able to perform a variety of cognitive tasks compared to younger ones, plus mood may be affected and sleep patterns.

It can be treated through behavioural modification and training particularly enrichment and thinking about routine. Looking at nutrition and possible medication.

\*\*\* Consider environment and take everything into account \*\*\*

Often referred as DISHA

DISHA refers to Disorientation, Interactions that have been altered between pets and their family members or other pets, Sleep-wake cycle changes, House soiling, and Activity Level changes. With further research into brain aging in dogs and cats, behaviourists have recognized additional signs associated with cognitive dysfunction. An updated list of signs associated with cognitive dysfunction includes:

• Disorientation

• Interactions

• Sleep-wake cycle changes

• House soiling

• Activity levels

• Anxiety

• Learning and memory

**CASE STUDY**

Fido 12 years old, Springer Spaniel. Barking in the evening when owners asleep, when owners leave house. Soiling in house (particularly at night). Disoriented in day, some 'absences' staring at walls. No change in appetite. No increase in anxiety noted. Dog appears slightly clingier. Less active. No prior separation issues.

Brought on by severe infection leading to diarrhoea.

Prior medical issues - cruciate ligament snapped on rear left leg, had three non-malignant masses removed from gum, lip and foot (April 2019). Given painkillers (Loxicom) daily  
Given Xanax last thing at night. In discussion medication from vets.

Full check-up, minus blood work (to be discussed).

**Troubleshooting**

How do I know if the behaviour is medical rather than Canine “senility”?

How do you know if separation anxiety?

What others factors are at play?

Has routine changed?

Where does dog sleep, does he favour area, what is flooring like?

Activity levels in day? Restless due to lack walking?

Other behaviours - staring, absences? clingy, deafness?

Geriatric pets increasing number of medical and degenerative problems that can look like canine senility?

A decline in hearing and sight can cause problems, such as if the animal is startled while resting or sleeping?

An increase or decrease in appetite and thirst are also signs to look out for?

Blood and urine tests are carried out to check for underlying medical problems?

Toilet routine? Fluid and food intake?

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**Diagnosis – inconclusive**

More research and monitoring needed.

Plan of action

Week 1 to 2 - increase enrichment, activity in day with free work. More sniffy walks. Consider adding soft carpet to laminate flooring, preference test to position of bed. Consider light in morning and radiator disturbing sleep. House very warm!!! Excessive panting? Potentially owner needs to extend time downstairs. Toilet breaks increased. Doesn't want dog to be upstairs. Camera installed further monitoring. Review after 2 weeks. More tests by vet? Discussion medication?

Concerns from vet - is behaviour being strengthened by owner coming down when barks? Previous medical issues, reduced exercise, increased restlessness.

Re-look at routine, times of walks.

^ This is the tip of the iceberg.

***Update - since behavioural modification and training the dog has not barked/toileted at night for a period of a week (frequency was most nights).***

***Will keep you all updated.***